

Black & Decker



**PORTABLE
ELECTRIC
TOOLS**

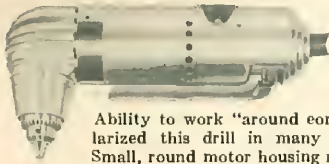
1949

STANDARD

CATALOG



"ELECTRIC TOOL HEADQUARTERS"

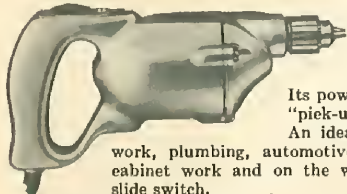


1/4" SHORTY Drill (BALL-BEARING EQUIPPED)

Ability to work "around corners" and in small openings has popularized this drill in many production and assembly operations. Small, round motor housing requires no extra handle.

Capacity: In steel.....up to 1/4"; In hardwood.....up to 1/2"
Speed: No-load.....2500 R.P.M.; Full load.....1600 R.P.M.
Optional No-load Speeds (no extra).....3700 or 5000 R.P.M.
Overall length: Chuck spindle end.....4 1/2"; Lengthwise.....8 3/4"
Weight: Net.....4 lbs.
Price, Paddle Switch Unit complete, specify voltage (Cat. No. 287).....\$56.00
Special Order:—1/4" SHORTY with toggle switch in end cap (Cat. No. 298).....\$56.00

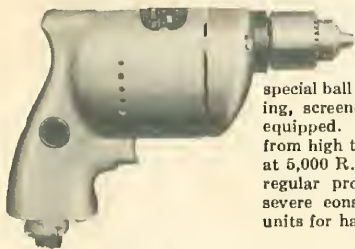
1/4" JUNIOR ELECTRIC DRILL



Designed for intermittent service in shops and for maintenance work. "Compo" oilless bearings for smooth operation. Its powerful motor will handle hundreds of "pick-up" drilling jobs in metal and wood. An ideal drill for tool kit in maintenance work, plumbing, automotive repair, electrical, carpentry and cabinet work and on the work bench. Has thumb operated slide switch.

Capacity: In steel.....up to 1/4"; In hardwood.....up to 1/2"
Speed: No load.....2000 R.P.M.; Full load.....1400 R.P.M.
Weight: Net.....3 3/4 lbs. Shipping Weight.....5 lbs.
Overall length.....10 3/4"
Price, complete, specify voltage (Cat. No. 30).....\$28.00

THE 1/4" HOLGUN ELECTRIC DRILL



A PERFECTLY proportioned "Handful of Power" of surprising compactness and smooth lines. "Pistol Grip and Trigger Switch," special ball spindle bearing, splined gear mounting, screened air inlets and full ball-bearing equipped. Available in eight spindle speeds from high torque at 500 R.P.M. to high speed at 5,000 R.P.M. Choose Standard Models for regular production; Heavy-Duty Models for severe constant service schedules; low speed units for hard alloys.

1/4" Standard HOLGUN	Standard Speed Model	Low Speed Model
Capacity in steel.....	up to 1/4"	up to 1/4"
No-load Speed.....	1700 R.P.M.*	500 R.P.M.†
Weight: Net.....	3 lbs.	3 1/4 lbs.
Shipping.....	4 1/2 lbs.	4 1/2 lbs.
Overall length.....	6 3/4"	7 1/8"
Spindle Offset.....	3 1/2"	3 5/8"
Cat No.....	345	346
Price, complete, specify voltage.....	\$38.00	\$44.00

1/4" Heavy-Duty HOLGUN	Standard Speed Model	Low Speed Model
Capacity in steel.....	up to 1/4"	up to 1/4"
No-load Speed.....	1700 R.P.M.*	500 R.P.M.†
Weight: Net.....	3 1/2 lbs.	3 3/4 lbs.
Shipping.....	5 1/2 lbs.	5 1/2 lbs.
Overall length.....	7 3/4"	8 3/8"
Catalog No.....	457	460
Price, complete, specify voltage.....	\$42.00	\$48.00

1/4" Heavy-Duty HOLGUN (SIDE HANDLE MODEL—NOT ILLUSTRATED)	Standard Speed Model	Low Speed Model
Capacity in steel.....	up to 1/4"	up to 1/4"
No-load Speed.....	1700 R.P.M.*	500 R.P.M.†
Weight: Net.....	4 lbs.	4 1/4 lbs.
Shipping.....	6 lbs.	6 1/4 lbs.
Overall length.....	8 1/8"	8 3/4"
Catalog No.....	459	462
Price, complete, specify voltage.....	\$42.00	\$48.00

*Optional speeds (no extra cost)—2500, 3500 or 5000 R.P.M.
†Optional speeds (no extra cost)—750, 1000 or 1500 R.P.M.

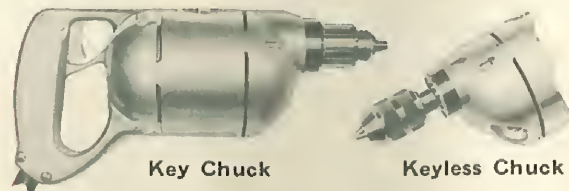
1/4" STANDARD DRILL (BALL-BEARING EQUIPPED)



The popular 1/4" Standard Drill is supplied in very sturdy aluminum alloy housings. This feature adds strength and ability to stand abuse, while retaining light weight-to-power ratio. Chuck spindle bearing is double grease sealed with inner and outer races locked.

Capacity in steel.....up to 1/4"	Net Weight.....5 1/4 lbs.
Speed: No-load (Std.).....2000 R.P.M.	Shipping Weight.....7 1/2 lbs.
Optional No-load Speeds } 3500 R.P.M.	Overall length.....12 1/8"
(at no extra cost).....} 5000 R.P.M.	Cat. No. (specify voltage).....31
Price, complete.....	\$44.00
Equipped with No. 24322 Chuck Protector.....	\$1.00 extra

1/4" HEAVY DUTY DRILL



Key Chuck

Keyless Chuck

A sturdy, perfectly balanced drill for constant service on production and heavy duty maintenance work. Especially suited to driving Carbon Cleaning Tools. Armature and chuck mounted on ball bearings. Automatic release switch with thumb latch for optional use.

Capacity: In steel.....up to 1/4"	In hardwood.....1 1/2"
Speed: No load.....2000 R.P.M.	Full load.....1280 R.P.M.
Weight: Net.....6 3/4 lbs.	Shipping.....9 3/4 lbs.
Overall length.....	12 1/2"
Price, with geared chuck and key—(Cat. No. 32).....	\$50.00
Price, with Portomatic keyless chuck—(Cat. No. 386).....	\$53.00

5/16" HEAVY DUTY ELECTRIC DRILL

(BALL-BEARING EQUIPPED)
(SEE ILLUSTRATION OF 1/4" HEAVY DUTY)

Designed for industrial production service on cabinet and body assembly, and especially suited to lead hole drilling on screwdriving operations. Automatic release switch equipped with thumb latch for optional use. Armature and chuck spindle mounted on ball bearings.

Capacity: In steel.....up to 5/16"	In hardwood.....5/8"
Speed: No load.....1400 R.P.M.*	Full load.....920 R.P.M.
Weight: Net.....7 lbs.	Shipping.....9 3/4 lbs.
Overall length.....	12 3/8"
Price, with geared chuck and key (Cat. No. 360).....	\$52.00
Price, with Portomatic keyless chuck (Cat. No. 387).....	\$55.00

*Special Speed—1000 R.P.M.—\$2.50 extra.

3/8" STANDARD BALL-BEARING DRILL

Sturdy aluminum alloy housings provide high power-to-weight ratio, improve strength and life of housings. Double grease sealed spindle bearing; inner and outer races locked in place.



SPECIFICATIONS

Capacity in steel.....up to 3/8"	Weight: Net.....6 1/8 lbs.
No-load Speed.....700 R.P.M.	Shipping.....8 1/2 lbs.
Optional No-load Speeds } 350, 500, or	Overall length.....13 3/8"
(at no extra cost).....} 1100 R.P.M.	
Price, complete, specify voltage (Cat. No. 490).....	\$52.00

This Drill can be furnished with 5/16" geared chuck and no-load speed of 1100 R.P.M. at no extra cost.

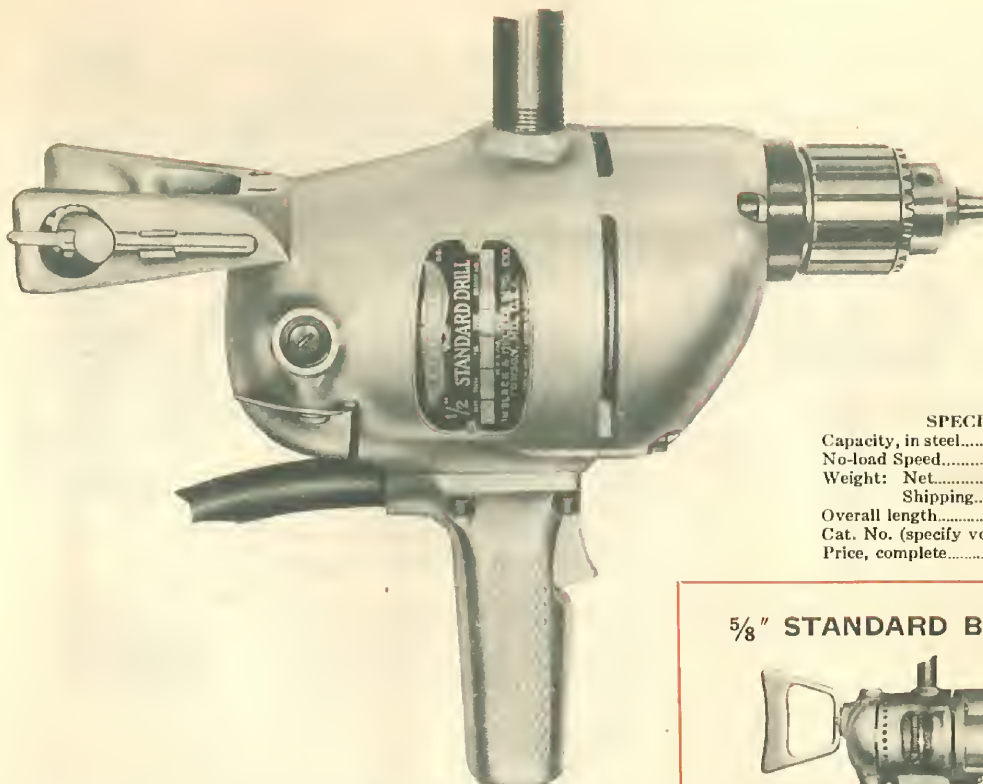
STANDARD EQUIPMENT, Drills shown above—3-conductor cable and plug; automatic-release trigger switch and locking pin (except 1/4" Junior and Shorty); 3 jaw Jacobs threaded chuck and key; Universal motor, operating on A.C. or D.C.

STANDARD VOLTAGE for Drills shown above—110 or 220. On special order 125 or 240 volts. 1/4" Standard Drill only, also 32 volts from stock.

DRILL CAPACITIES in hardwood are up to twice drill capacity in steel.

"ELECTRIC TOOL HEADQUARTERS"

Black & Decker



1/2" STANDARD Ball-Bearing DRILL

The most popular general purpose Portable Electric Drill. You'll note its perfect operating balance instantly; also the close-coupled construction, minimum spindle offset and horizontal spade handle—all so important when drilling in confined space.

SPECIFICATIONS

Capacity, in steel.....	up to 1/2"
No-load Speed.....	400 R.P.M.
Weight: Net.....	9 3/4 lbs.
Shipping.....	13 lbs.
Overall length.....	13 3/4"
Cat. No. (specify voltage).....	361
Price, complete.....	\$58.00

3/8" HEAVY DUTY BALL-BEARING DRILL

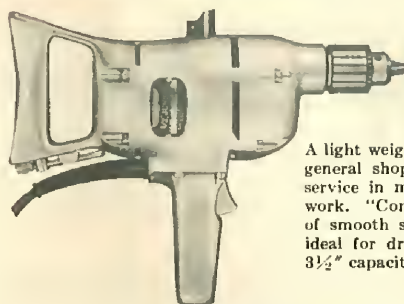
SEE ILLUSTRATION OF 1/2" STANDARD ABOVE

Designed for industrial use in plants where production drilling of 3/8" holes at high speed is required. Design and construction features same as for 1/2" Standard Drill.

SPECIFICATIONS

Capacity, in steel.....	up to 3/8"
No-load Speed.....	900 R.P.M.
Weight: Net.....	9 1/2 lbs.
Shipping.....	12 3/4 lbs.
Overall length.....	13 1/2"
Cat. No. (specify voltage).....	362
Price, complete.....	\$58.00

1/2" JUNIOR DRILL

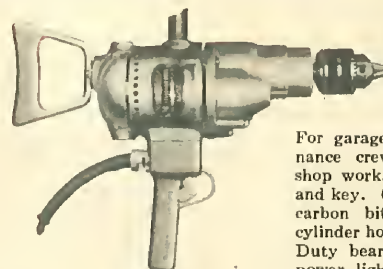


A light weight tool designed for the general shop and for intermittent service in maintenance and repair work. "Compo" bearings for years of smooth service. Spindle speed ideal for driving hole saws up to 3 1/2" capacity.

SPECIFICATIONS

Capacity, in steel.....	up to 1/2"
No-load Speed.....	375 R.P.M.
Weight: Net.....	9 1/8 lbs.
Shipping.....	11 3/4 lbs.
Overall length.....	14 1/4"
Cat. No. (specify voltage).....	38
Price, complete.....	\$45.00

5/8" STANDARD BALL-BEARING DRILL

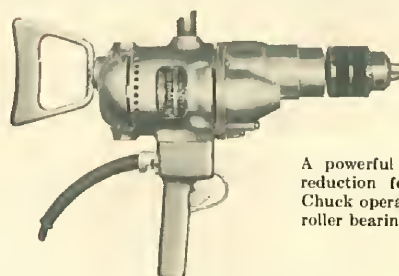


For garages, body shops, maintenance crews and general service shop work. Jacobs geared chuck and key. Correct spindle speed for carbon bits, augers, Hole Saws, cylinder hones, hard metals. Heavy-Duty bearing construction, ample power, light weight.

SPECIFICATIONS

Capacity, in steel.....	5/8" to 5/4"
No-load speed.....	300 R.P.M.
Weight: Net.....	17 lbs.
Shipping.....	21 3/4 lbs.
Overall length.....	18"
Cat. No. (specify voltage).....	238
Price, complete.....	\$72.00

3/4" STANDARD BALL-BEARING DRILL



A powerful tool, with triple gear reduction for low spindle speed. Chuck operates on Timken tapered roller bearings.

SPECIFICATIONS

Capacity, in steel.....	3/4" to 3/4"
No-load Speed.....	250 R.P.M.
Weight: Net.....	19 1/4 lbs.
Shipping.....	25 1/2 lbs.
Overall length.....	18 3/4"
Cat. No. (specify voltage).....	239
Price, complete.....	\$80.00

STANDARD EQUIPMENT. All Drills shown above—3 conductor cable and plug; automatic-release trigger switch and locking pin; 3 jaw Jacobs threaded chuck and key; Universal motor, operating on A.C. or D.C.

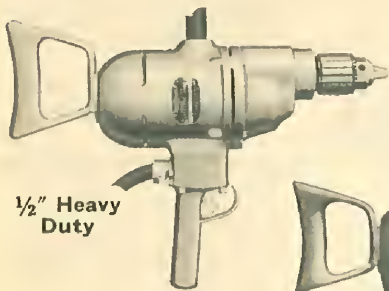
STANDARD VOLTAGE for all Drills—110 or 220. On special order 125 or 240 volts. 1/2" Standard Drill only, also 32 volts from stock.

DRILL CAPACITIES in hardwood are up to twice drill capacity in steel

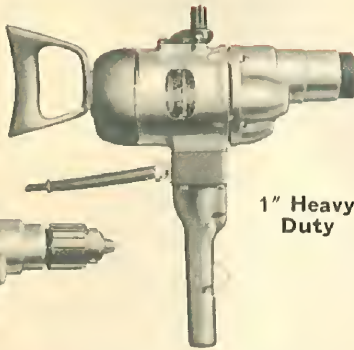


"ELECTRIC TOOL HEADQUARTERS"

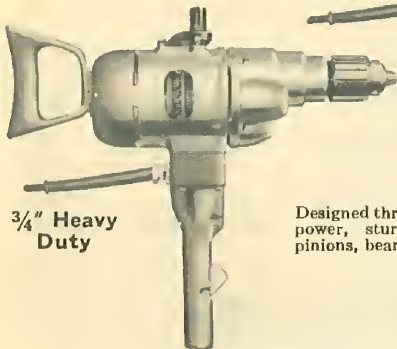
HEAVY-DUTY DRILLS



1/2" Heavy
Duty



1" Heavy
Duty



3/4" Heavy
Duty

Designed throughout for severe use. Ample power, sturdy housings, rugged gears, pinions, bearings and spindles.

1/2" HEAVY DUTY DRILL

Designed for better balance, greater efficiency and smoother operation on heavy-duty service. Ball bearings on chuck spindle absorb both side and end thrust. Armature shaft mounted on ball bearings.

Capacity, in steel.....	up to 1/2"
No-load Speed.....	500 R.P.M.*
Net weight.....	17 lbs.
Overall length.....	18 1/2"

Optional—Nos. 1 or 2 Morse Taper Socket instead of chuck.

Price, complete, specify voltage—(Cat. No. 40).....\$77.00

*Special Speeds: 750 or 900 R.P.M.....\$5.00 extra

5/8" HEAVY DUTY DRILL

Equipped with roller spindle bearing, Jacobs geared chuck and key.

Capacity, in steel.....	5/8" to 5/4"
No-load Speed.....	450 R.P.M.
Net weight.....	21 1/4 lbs.
Overall length.....	20"

Optional—No. 2 Morse Taper Socket instead of chuck.

Price, complete, specify voltage—(Cat. No. 42).....\$95.00

3/4" HEAVY DUTY DRILL

Taper-roller spindle bearing, extra long switch handle and pipe handle, special safety switch, Jacobs geared chuck and key.

Capacity, in steel.....	3/4" to 3/2"
No-load Speed.....	375 R.P.M.*
Net weight.....	27 1/2 lbs.
Overall length.....	21"

Optional—Nos. 2 or 3 Morse Taper Socket instead of chuck.

Price, complete, specify voltage—(Cat. No. 45).....\$105.00

*Special Speeds: 275, 600 or 900 R.P.M.....\$5.00 extra

1" HEAVY DUTY DRILL

No. 3 Morse taper socket. Drilling in steel, 1"; light reaming, 3/4" heavy reaming, 5/8".

No-load Speed.....	350 R.P.M.*
Net weight.....	28 1/2 lbs.
Overall length.....	20"

Price, complete, specify voltage—(Cat. No. 47).....\$120.00

*Special Speeds—275, 600 or 900 R.P.M.....\$5.00 extra

1 1/4" HEAVY DUTY DRILL

A new unit of increased power, with extra long safety switch and pipe handles. Motor housing is cast with adaptor pad to fit this Drill to No. 80 Drill Stand. Drilling capacity, in steel, up to 1 1/4". (With 3-2 or 3-1 Reducing Sleeve, range is extended down to 1/8").

Reaming capacity, light, up to 1"; heavy, up to 3/4".

No-load Speed (standard).....	250 R.P.M.*
Net weight.....	32 lbs.
Overall length.....	20 1/2"

Price, complete, specify voltage—(Cat. No. 494).....\$135.00

*Special No-load Speeds: 350, 600, 900 R.P.M.....\$5.00 extra

Reversing switch for above drills.....\$10.00 extra

Standard Voltage on above drills—110 or 220. On special order 125 or 240 volts also available. Universal Motors for A.C. or D.C.

Quickly adapt portable drills to drill press operations; for heavy duty and accurate work. Handle leverage permits tremendous pressure; bracket adjustable for height and lateral position; one bracket fits several tools and no adaptors are required.

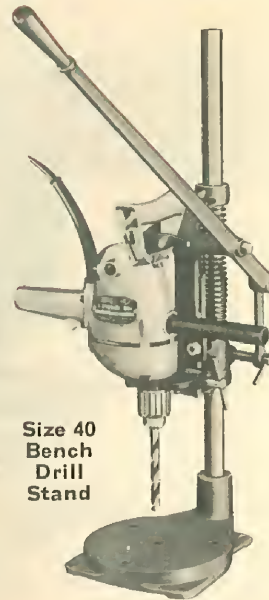
SIZE 20 DRILL STAND—Fits all end-handle Drills from 1/4" Junior to 3/8" Standard; the SCRUGUN, TAPGUN, No. 14 and No. 18 Screw-Drivers and 1/4" Tapper. Maximum feed is 2"; from C/L Bit to C/L Column is 5 1/4".
CAT. No. 22148 BENCH DRILL STAND
—Net Weight 16 lbs.; shipping 19 1/2 lbs.
Price.....\$19.00

SIZE 40 DRILL STAND—Fits 3/8" Heavy-Duty, 1/2" Junior, 1/2" Utility, 1/2" Standard Drills. Maximum feed is 4"; from C/L Bit to C/L Column is 6".
CAT. No. 22145 BENCH DRILL STAND
—Net Weight 30 lbs.; shipping 37 lbs.
Price.....\$26.00

SIZE 60 DRILL STAND—Fits all side-handle Drills from 1/2" Heavy-Duty to the 1" Heavy-Duty. Maximum feed is 4"; from C/L Bit to C/L Column is 8".
CAT. No. 13857 BENCH DRILL STAND
—Net Weight 59 lbs.; shipping 69 lbs.
Price.....\$40.00

SIZE 80 DRILL STAND—Fits the 1 1/4" Heavy-Duty Drill only. Maximum feed is 4"; from C/L Bit to C/L Column is 12".
CAT. No. 26607 BENCH DRILL STAND
—Net Weight 73 lbs.; shipping 90 lbs.
Price.....\$52.00

DRILL STANDS



Size 40
Bench
Drill
Stand



No. 23016 HORIZONTAL DRILL STANDS for current models of 1/4" Standard (End Handle), 1/4" H.D., 3/8" Utility, 3/8" H.D., 1/2" Standard, 1/2" Utility, 1/2" End Handle Drills, and Nos. 18 and 16 Gauge Shears.....\$4.25

No. 8169 HORIZONTAL DRILL STAND for 1/4" Junior Drills.....\$3.00

CHUCKS

Replacement geared chucks and chuck keys are available for all sizes and types of Electric Drills. Most 1/4" to 3/8" Drills may be equipped with Portomatic Keyless Chucks at small cost. Eliminate lost time and damage from lost keys.

CHUCKS ON MORSE TAPER ARBORS



3/8" and 3/4" capacity geared chucks on proper size Morse Taper Arbors can be furnished for Drills equipped with M. T. Sockets.



FEED SCREWS

For applying heavy, steady pressure when drilling in awkward places. Adapted to 1/2" Heavy Duty and larger Drills.

AUXILIARY SIDE HANDLE



For end handle Drills and Screw Drivers, to provide accurate control and greater feed pressure.

RIGHT ANGLE DRILLING ATTACHMENT

Enables operator to reach out-of-the-way places in work on joists, etc. A handy attachment for all types of contracting jobs and electrical installations. Equipped with 3-jaw Geared Chuck, 1/2" capacity.

No. 23574 Right Angle Attachment for 1/2" Junior (B).....\$38.00

No. 17819 Right Angle Attachment for 1/2" Standard and 1/2" Utility.. 38.00

No. 17820 Right Angle Attachment for 1/2" H.D. (A and B) and 3/8" Standard..... 38.00

WHEEL ARBORS

Adapt 1/4" and 1/2" Drills to light grinding and wire brushing, by holding wheels in chuck of drill. Body of arbor is 1/2" diameter and will take 3" and 4" wheels.

No. 3071 1/4" Drill Arbor (1/2" diam.; 1/4" shank).....\$.85

No. 8449 1/2" Drill Arbor (1/2" diam.; 1/2" shank)..... 1.75

SANDING PAD ARBOR

No. 23041 Arbor for 5" Sanding Pad; fits 1/4" H.D., 3/8" and 3/8" Drills (3/8"-11 thr., 1/4" shank).....\$.75

"ELECTRIC TOOL HEADQUARTERS"

Black & Decker

HOLE SAWS

Cut clean, round holes in steel, cast iron, sheet metal, wood or any material a hack saw will cut. Available in three types: fine-tooth for sheet metal, steel and all thin materials; coarse-tooth for cast iron, wood, fibre and all thick materials; both of highest quality tungsten steel, and a new HIGH-SPEED Hole Saw for hard alloys and production work.



SAW SIZE OUTSIDE DIAM.	FINE-TOOTH SAW CAT. NO.	COARSE-TOOTH SAW CAT. NO.	PRICE EACH (SAW ONLY WITHOUT MANDREL)	HIGH SPEED SAW	
				Cat. No.	Price
5/8"	23051	14906†	\$1.65**		
3/4"	16882†	14908†	.55	21747†	\$1.28
7/8"	16883†		.55	21748†	1.28
1 1/8"	21382†		.55	21749†	1.28
1"	16884†	14910†	.55	21771†	1.28
1 1/16"	21875†	22953†	.72	22809†	1.28
1 1/8"	16885†	14912†	.72	21772†	1.28
1 1/4"	17678†	17679†	.72	21773†	1.28
1 1/2"	16886*	14911*	.72	21781*	1.28
1 3/8"	16887*	14913*	.72	21782*	1.28
1 1/2"	16888*	14914*	.72	21783*	1.28
1 5/8"	16889*	14915*	.85	21784*	1.28
1 3/4"	16890*	14916*	.85	21785*	1.70
1 7/8"	16891*	14917*	.85	21786*	1.70
2"	16892†	14918†	1.02	21787†	1.70
2 1/16"	16893†	14919†	1.02	21788†	2.26
2 1/8"	16894†	14920†	1.02	21789†	2.26
2 1/4"	16895†	14922†	1.20	21790†	2.26
2 3/8"	16896†	14921†	1.20	21791†	2.26
2 1/2"	16897†	14923†	1.20	21792†	2.26
2 5/8"	16898†	14924†	1.28	21793†	2.26
2 3/4"	16899†	14925†	1.28	21794†	2.26
2 7/8"	16900†	14927†	1.28	21795†	2.26
3"	16901†	14926†	1.40	21796†	2.26
3 1/8"	16902†	14930†	1.40	21797†	2.26
3 1/4"	16903†	14929†	1.40	21798†	2.26
3 1/2"		24172†	1.40		
3 3/4"	16904†	14928†	1.40	21799†	2.26
3 5/8"		24173†	1.70		
3 3/4"		24174†	1.70		
3 7/8"		24175†	1.70		
4"	16905†	14932†	1.70	21800†	3.85

MANDRELS FOR 1/4", 3/8" AND 1/2" DRILLS

†22181 Mandrel with Pilot Drill (for 3/4" to 1 1/8" Saws).....	\$1.65
*22182 Mandrel with Pilot Drill (for 1 1/4" to 1 1/2" Saws).....	1.70
22192 1/4" Pilot Drill, only for above mandrels.....	.40
23050 3/8" Pilot Drill (for 3/8" Hole Saw only).....	.30

**No. 23051 Hole Saw has a built-in Mandrel; no separate Mandrel supplied.

MANDRELS FOR 1/2" AND LARGER DRILLS

†14903 Mandrel with Pilot Drill (for 3/4" to 1 1/8" Saws).....	1.65
*14904 Mandrel with Pilot Drill (for 1 1/4" to 1 1/2" Saws).....	1.70
†18028 Mandrel with Pilot Drill (for 2" to 4" Saws).....	1.95
14935 1/4" Pilot Drill only, for above mandrels.....	.40

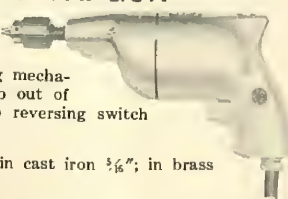
SPECIAL HOLE-SAWS

Special Tungsten Hole Saws, with extra-coarse tooth arrangement at 50c higher than standard prices up to 1 1/2", and \$1.00 higher in 2" to 4" sizes. SPECIAL DEPTH HOLE SAWS—For home insulation and other uses requiring extra depth, the following special coarse-tooth Tungsten Hole Saws, with 1 1/4" depth-of-cut, and special Mandrel, are available.

No. 24576 2 1/2" Special Hole Saw.....	\$2.78
No. 18635 3" Special Hole Saw.....	2.78
No. 24578 Special Mandrel with pilot drill for above Hole Saws.....	1.95
No. 24577 Pilot drill for No. 24578 Mandrel.....	.40

3/16" ELECTRIC TAPGUN

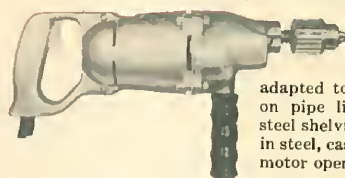
Fills the increasing demand for a lighter weight unit to handle portable tapping operations in small sizes on numerous assembly jobs. Has automatic reversing mechanism which automatically backs the tap out of the threaded hole at high speed. No reversing switch is needed.



Tapping capacity: In mild steel 3/16"; in cast iron 1/8"; in brass or aluminum 3/8".

Speed: No-load.....	400 R.P.M.	Reversing.....	525 R.P.M.
Weight: Net.....	3¾ lbs.	Shipping.....	5 lbs.
Overall length.....			
Price, complete, specify voltage—(Cat. No. 383).....	\$ 68.00		
With No. 32376 Tap-Holding Chuck.....	71.50		
Standard Voltage—110 or 220. On special order, 125 or 240 volts.			
Universal Motor.			
Universal Motor operates on A.C. or D.C.			

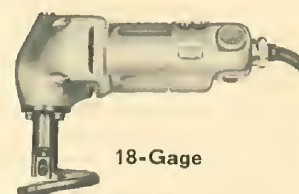
1/4" TAPPER



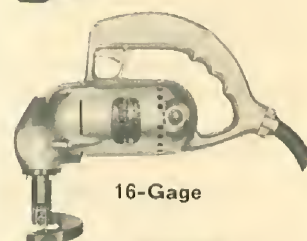
For industrial use where production tapping must be done on pieces too large or heavy to handle in a machine tapper. Especially adapted to installation and maintenance work on pipe lines, heating and lighting systems, steel shelving, partitions, etc. Threading holes in steel, cast iron, brass or aluminum. Universal motor operates on A.C. or D.C.

Tapping capacity.....	3/8" in cast iron; 1/4" in steel; 1/2" in brass
Speed: No-load.....	300 R.P.M. Reversing..... 500 R.P.M.
Weight: Net.....	10 1/2 lbs. Shipping..... 14 1/2 lbs.
Overall length.....	15 3/4"
Price, complete, specify voltage—(Cat. No. 90).....	\$87.00
With No. 32377 Tap-Holding Chuck.....	92.00
Special Speeds—500, 700 R.P.M.....	\$5.00 extra
Standard Voltage—110 or 220. On special order, 125 or 240 volts.	
Universal Motor.	

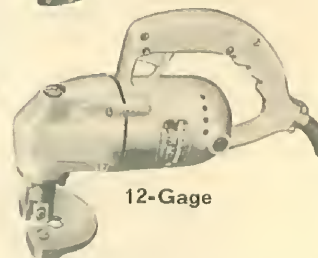
ELECTRIC PORTO-SHEARS



18-Gage



16-Gage



12-Gage

The Porto-Shear will cut all types of sheet metal quickly, easily, and accurately. It is also used successfully for cutting thin sections of laminated wood and sheet plastics with slight changes in blade contours. Porto-Shears cut to small radii, and easily follows a straight or irregular pattern line—because the cutting blade is always visible. Porto-Shears easily cut to rated capacity in steel and galvanized iron; about one gage thinner in Monel and stainless; and 50% above rating in copper, aluminum, lead and other non-ferrous metals. Blades can be reground without special fixtures. All units are full ball-bearing equipped (except eccentric) and powered by Universal motors.

No. 18 GAGE PORTO-SHEAR New housings of pressed steel have reduced the diameter, overall length and weight of this unit—greatly improving the operating balance and ease of handling. The housing serves as a "self-handle", eliminating the end handle. Power and capacity are equal to previous model.

No. 16 GAGE PORTO-SHEAR A new operating handle makes this larger, more powerful unit much easier to use. The handle contains an instant-release trigger switch, and may be held at any position, over-top to rear-end, for best balance and control. Power and capacity same as previous model.

No. 12 GAGE PORTO-SHEAR A powerful new unit developed to shear 12-gage steel and galvanized iron. Also cuts about two gages thinner in Monel and stainless, and approximately 50% above rating in sheet copper, aluminum, lead and other non-ferrous metals. Cutting action is clean and smooth without burrs or ragged edges.

	No. 18 Gage Porto-Shear	No. 16 Gage Porto-Shear	No. 12 Gage Porto-Shear
Capacity, in steel, (U. S. Std.).....	18-gage	16-gage	12-gage
Cutting Speed, (Strokes per min.).....	2500	2500	2000
Minimum Cutting Radius.....	1/2"	3/4"	1 1/2"
Weight: Net.....	5 1/2 lbs.	8 1/2 lbs.	11 lbs.
Shipping.....	8 lbs.	10 1/2 lbs.	13 1/2 lbs.
Overall length.....	9 1/2"	12 1/2"	12 1/2"
Cat. No., (specify voltage).....	258	259	507
Price, complete.....	\$82.00	\$85.00	\$135.00
Standard Voltage—110 or 220. On special order, 125 or 240 volts.			
Universal Motor.			



"ELECTRIC TOOL HEADQUARTERS"

NO. 4 TORSIMETER ADJUSTABLE CLUTCH SCREWDRIVER



Pre-adjusted to correct driving torsion; insures uniform results in production screw driving. A light, compact tool for small trim work, cabinet and airplane assembly.

Specially adapted to self-threading screws in light metal.

Quick-change chuck $\frac{1}{4}$ " hex. socket.

Capacity—Up to No. 4 Screws; No-load Speed, 1000 R.P.M.

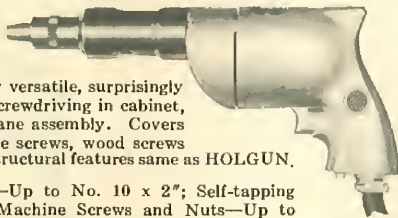
No. 4 Torsimeter with paddle switch—(Cat. No. 244), specify voltage.....\$80.00

Reversing switch.....\$7.50 extra

Net weight, 3 lbs.; overall length, $11\frac{1}{2}$ "; shipping weight, 4 lbs.

NO. 10 SCRUGUN

POSITIVE AND ADJUSTABLE CLUTCH SCREWDRIVERS



Extremely compact, highly versatile, surprisingly powerful; for production screwdriving in cabinet, trim, auto body and airplane assembly. Covers wide size range in machine screws, wood screws and self-tapping screws. Structural features same as HOLGUN.

Capacity: Wood screws—Up to No. 10 x 2"; Self-tapping Screws—Up to No. 12; Machine Screws and Nuts—Up to $\frac{1}{4}$ " diameter.

Standard spindle Speed—(No-load), 750 R.P.M.

Optional Speeds—(No extra cost), 500, 1000, 1500 R.P.M.

Equipped with quick-change chuck, $\frac{1}{4}$ " hex. socket.

NO. 10 POSITIVE CLUTCH SCRUGUN

Has positive-type clutch which permits free spindle to idle until bit "finds" screw slot.

Net weight, $3\frac{1}{2}$ lbs.; overall length, $8\frac{3}{4}$ "; shipping weight, $4\frac{3}{4}$ lbs.

Price, complete, specify voltage—(Cat. No. 402).....\$55.00

NO. 10 ADJUSTABLE CLUTCH SCRUGUN (ILLUSTRATED)

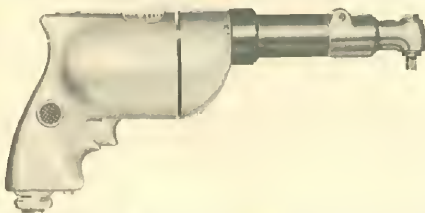
Automatically drives every screw to uniform depth.

Double clutch "cushions" the torque and relieves operator of any twisting motion as screw is driven home. Free spindle idles until operating pressure is applied.

Net weight, $3\frac{3}{4}$ lbs.; overall length, $10\frac{1}{4}$ "; shipping weight, $5\frac{1}{4}$ lbs.

Price, complete, specify voltage—(Cat. No. 350).....\$68.00

NO. 10 RIGHT-ANGLE SCRUGUN



By adding the advantages of the right-angle drive to the No. 10 Scrugun, "corner" work, limited clearance and other obstacles to the efficient use of the straight-drive unit are overcome. See master catalog for available heads.

Capacity: Machine screws and nuts, up to $\frac{1}{4}$ " diameter; Self-tapping screws, up to No. 12.

No-load Speed, 500 R.P.M.*

	Standard Unit	Bonnet Grip	Paddle Switch
Weight: Net.....	$4\frac{1}{2}$ lbs.	$5\frac{1}{4}$ lbs.	$5\frac{1}{4}$ lbs.
Shipping.....	6 lbs.	7 lbs.	7 lbs.
Overall length.....	$10\frac{3}{4}$ "	$14\frac{1}{8}$ "	$14\frac{1}{8}$ "
Cat. No.....	374	390	391
Price, complete with one head—			
No. 100 to 108 Heads.....	\$ 93.00	\$ 98.00	\$101.00
No. 150 to 152 Heads.....	101.00	106.00	109.00
No. 156 Head.....	113.00	118.00	121.00

Reversing Switch—Paddle Switch and Bonnet Grip units only.....\$7.50

*Optional Speeds (no extra charge)—350, 750 or 1000 R.P.M.

†These units similar to Center-Drive Scrugun.

NO. 10 CENTER-DRIVE SCRUGUN



Ideal for operation in suspended position. Center spindle improves "aim"; bonnet grip or paddle switch arrangements eliminate handles; operates in reverse at full power when equipped with reversing switch.

Net weight, $4\frac{3}{4}$ lbs.; overall length, $13\frac{1}{2}$ ", shipping weight, 6 lbs.

Other specifications same as No. 10 Scrugun.

Price, 10 Adjustable Clutch Scrugun—with Bonnet Grip—(Cat. No. 380).....\$73.00

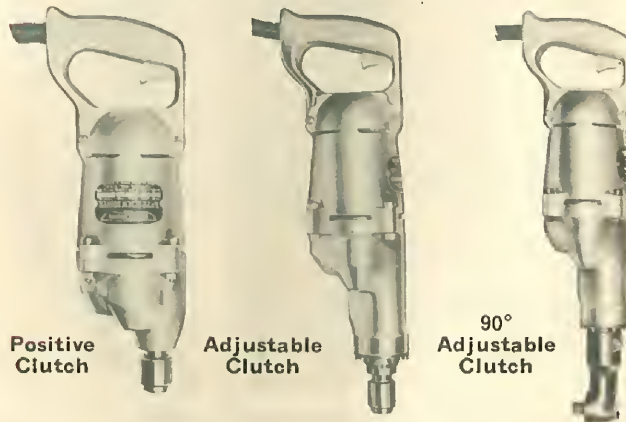
With Paddle Switch—(Cat. No. 381).....76.00

Price, 10 Positive Clutch Scrugun—with Bonnet Grip—(Cat. No. 403).....60.00

With Paddle Switch—(Cat. No. 404).....63.00

Reversing Switch for No. 10 Center Drive Scruguns.....\$7.50

NO. 14 and NO. 18 SCREW DRIVERS



Nos. 14 and 18 Screw Drivers are capable of constant production in screw driving operations in metal or wood, nut tightening, boat building, body work, assembling and crating. Have $\frac{1}{8}$ " hex. socket chuck and can be equipped with reversing switch for disassembly work.

No. 30426 Auxiliary Side Handle for No. 14 Screw Drivers.....\$2.75 extra

No. 30427 Auxiliary Side Handle for No. 18 Screw Drivers.....\$2.75 extra

Capacities:	No. 14	No. 18
Wood Screws.....	$14 \times 2\frac{1}{2}$ "	$18 \times 3\frac{1}{2}$ "
Self-tapping Screws.....	$\frac{1}{8}$ " Dia.	$\frac{3}{8}$ " Dia.
Lag Screws.....	$\frac{1}{4}$ " x 2"	$\frac{1}{2}$ " x 3"
Machine Screws and Nut.....	$\frac{3}{8}$ " Dia.	$\frac{1}{2}$ " Dia.

Standard Voltage—110 or 220. On special order 125 or 240 volts.

Standard No-load Speed 500 R.P.M.*

NO. 14 POSITIVE CLUTCH DRIVER

Pin-type clutch permits spindle to idle until bit finds screw slot. Throws out when operating pressure is released.

Net weight, $6\frac{3}{4}$ lbs.; overall length, $13\frac{1}{4}$ ", shipping weight, 9 lbs.

Price, complete, specify voltage—(Cat. No. 53).....\$65.00

*Special Speeds—750, 1000 or 1600 R.P.M.....\$2.50 extra

NO. 14 ADJUSTABLE CLUTCH DRIVER

Adjustable clutch adapts driving torque to specific operation, insuring uniform results. Spindle idles until operating pressure is applied.

Net weight, 8 lbs.; overall length, $15\frac{1}{2}$ "; shipping weight, 12 lbs.

Price, complete, specify voltage—(Cat. No. 169).....\$90.00

*Special Speeds—750, 1000 or 1600 R.P.M.....\$2.50 extra

NO. 14—90° ANGLE ADJUSTABLE DRIVER

Several 90° angle heads with various shanks or sockets, and adjustable clutch feature adapt this unit to many special assembly operations in hard-to-reach places. See Master Catalog for available heads, and Cat. numbers.

Net weight, $9\frac{1}{2}$ lbs.; overall length, $18\frac{1}{4}$ ", shipping weight, 13 lbs.

Price, complete, with one head—(except 305), specify voltage.....\$118.00

With No. 305 Head.....128.00

*Special Speeds—350 or 700 R.P.M.....\$2.50 extra

Reversing Switch for all No. 14 Drivers.....\$7.50 extra

NO. 18 SCREW DRIVERS ON NEXT PAGE

SCREW DRIVERS (Continued)

No. 18 POSITIVE CLUTCH DRIVER

Positive clutch permits spindle to idle until operating pressure engages clutch jaws. Kicks out when pressure is released.

Net weight, 9 lbs.; overall length, 14 $\frac{1}{4}$ "; shipping weight, 11 $\frac{3}{4}$ lbs.
Price, complete, specify voltage—(Cat. No. 54).....\$77.00
*Special Speeds—750, 1000 or 1600 R.P.M.....\$2.50 extra

No. 18 ADJUSTABLE CLUTCH DRIVER

Selectivity of adjustable clutch and power of this unit ideal for tough production work. Clutch automatically releases each screw at uniform depth. Spindle idles until pressure is applied.

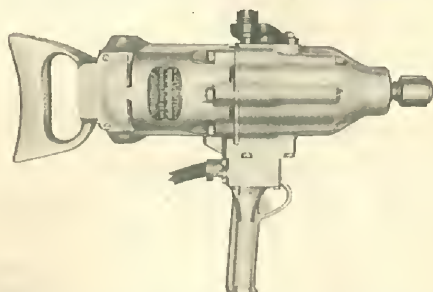
Net weight, 10 $\frac{1}{2}$ lbs.; overall length, 17 $\frac{1}{4}$ "; shipping weight, 16 lbs.
Price, complete, specify voltage—(Cat. No. 164).....\$98.00
*Special Speeds—750, 1000 or 1600 R.P.M.....\$2.50 extra

No. 18—90° ANGLE ADJUSTABLE DRIVER

Limited clearance, corner work and other obstacles to production screw driving and nut running are overcome by the various 90° angle heads and adjustable clutch. Several interchangeable heads, with various shanks or sockets. See Master Catalog for Head Specifications and Code Numbers.

Net weight, 12 lbs.; overall length, 19 $\frac{3}{4}$ "; shipping weight, 18 lbs.
Price, specify voltage, with one right-angle head (except 305).....\$126.00
With No. 305 Head.....\$136.00
*Special Speeds—350 or 700 R.P.M.....\$2.50 extra
Reversing Switch for all No. 18 Drivers.....\$7.50 extra

5/8" ELECTRIC NUT RUNNER POSITIVE, ADJUSTABLE AND 90° ANGLE



The pin-type clutch in the spindle of the Positive unit automatically disengages when driving pressure is released. In the Adjustable unit the clutch automatically releases each screw at the same torsion point, assuring uniform results. Free spindle idles until operating pressure engages the clutch jaws. Adjustment of tension is quickly made.

For heavy duty screw driving and production assembly nut tightening. Has quick-change chuck with $\frac{3}{8}$ " hex. socket. Can be equipped with reversing switch. End switch handle is optional at no extra cost.

Capacity: Machine screws and nuts— $\frac{5}{8}$ " diameter; lag screws—up to $\frac{3}{8}$ " x 4 $\frac{1}{2}$ " long.
Standard No-load speed, 500 R.P.M.
Special Speeds—350 R.P.M.....\$5.00 extra
Reversing Switch.....\$10.00 extra

5/8" POSITIVE CLUTCH NUT RUNNER (Illustrated)

With Side Switch Handle—(Cat. No. 55).....\$140.00
With End Switch Handle—(Cat. No. 392).....140.00
Net weight, 21 $\frac{3}{4}$ lbs.; overall length, 20 $\frac{3}{8}$ "; shipping weight 28 $\frac{1}{2}$ lbs.

5/8" ADJUSTABLE CLUTCH NUT RUNNER

With Side Switch Handle—(Cat. No. 352).....\$160.00
With End Switch Handle—(Cat. No. 373).....160.00
Net weight 27 lbs.; overall length, 21 $\frac{3}{8}$ "; shipping weight, 29 lbs.

5/8"—90° ANGLE ADJUSTABLE NUT RUNNER

Can be equipped with any of 4 driving heads with various shanks or sockets. See Master Catalog for Head specifications and Cat. Numbers.

Net weight, 28 $\frac{1}{2}$ lbs.; overall length, 24 $\frac{1}{2}$ "; shipping weight, 38 lbs.
Price, specify voltage, with any one right-angle head.....\$200.00
Standard Voltage (All above units)—110 or 220.
On special order 125 or 240 volts. Universal Motors.

7/8" ELECTRIC NUT RUNNER POSITIVE, ADJUSTABLE AND 90° ANGLE

The most powerful unit for production assembly work. Equipped with quick-change chuck with $\frac{5}{8}$ " hex. socket. Can be equipped with reversing switch. Right angle unit can be had with end switch handle instead of side switch and spade handle, no extra cost.

Capacity: Machine screws and nuts—up to $\frac{7}{8}$ " diameter; lag screws—up to $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " long.
Standard No-load Speed, 500 R.P.M.
Special Speeds—350 or 900 R.P.M.....\$5.00 extra
Reversing Switch.....\$10.00 extra

7/8" POSITIVE CLUTCH NUT RUNNER

Net weight, 35 lbs.; overall length, 21 $\frac{3}{4}$ "; shipping weight 43 lbs.
(Cat. No. 56).....\$170.00

7/8" ADJUSTABLE CLUTCH NUT RUNNER (Illustrated)

Net weight, 47 $\frac{1}{2}$ lbs.; overall length, 26 $\frac{3}{8}$ "; shipping weight, 57 lbs.
(Cat. No. 353).....\$200.00

7/8"—90° ANGLE ADJUSTABLE NUT RUNNER

Can be equipped with either of 2 driving heads, with various shanks or sockets.
Net weight, 52 $\frac{1}{2}$ lbs.; overall length, 28 $\frac{3}{4}$ "; shipping weight, 65 lbs.
Price, with No. 505 Right Angle Head.....\$270.00
Price, with No. 506 Right Angle Head.....\$270.00

1" ELECTRIC NUT RUNNER

A positive clutch driver with low spindle speed and exceptionally high torque. Can also be supplied with solid spindle and $\frac{3}{4}$ " chuck for heavy duty drilling and slow speed reaming.

Capacity: Lag screws— $\frac{3}{4}$ " x 6"; nuts and bolts—1" diameter.
No-load Speed, 90 R.P.M.
Special Speeds—175 R.P.M.....\$5.00 extra
Net weight, 30 $\frac{3}{4}$ lbs.; overall length, 22 $\frac{3}{4}$ "; shipping weight, 39 $\frac{3}{4}$ lbs.
Price, with quick-change chuck, $\frac{5}{8}$ " hex. socket—(Cat. No. 245).....\$170.00
Price, with solid spindle and $\frac{3}{4}$ " Jacobs chuck and key.....185.00

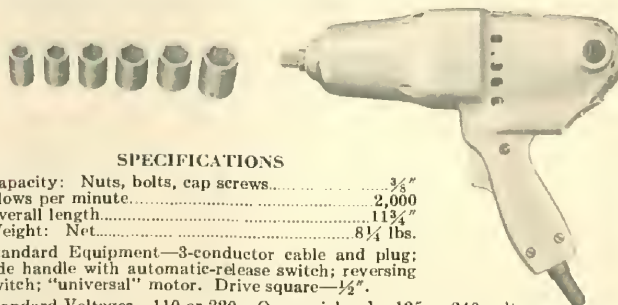
Standard Voltage (All above units)—110 or 220.
On special order 125 or 240 volts. Universal Motors.

NEW—3/8" IMPACT WRENCH

The Electric Impact Wrench is a completely new unit for rapid tightening and removal of nuts, bolts and cap screws. In tightening operations, the Wrench spins a free-running fastener to a seating position by high speed direct drive; immediately the clutch throws into operation a rapid, positive hammering action which tightens the fastener with thousands of quick, sharp blows per minute. Just a few seconds of this positive impacting is all that's needed for maximum tightness. And there is practically no torque reaction to the operator—no uncomfortable jarring or twisting—no "fighting" the Wrench to get results.

To remove fasteners—even the stubborn "frozen" ones—flip the convenient reversing switch and the impact mechanism hammers the part loose, then spins it off quickly by direct drive. The action and power of the Wrench are the same in either direction. And the motor cannot be stalled—even if the spindle is stopped "dead"—so there's no danger of overload or "burn-out".

With all this power and performance, the Impact Wrench is light and perfectly balanced. Sturdy cast-aluminum housings combine strength and lightness; a comfortable pistol-grip side handle contains the instant-release trigger switch; the toggle reversing switch is conveniently located in a recess above the handle for thumb operation. And the full-powered universal motor is ball-bearing mounted and amply ventilated. All spindles and gears are of special heat-treated alloy steel. The Impact Wrench is conservatively rated to drive and loosen nuts, bolts and cap screws up to $\frac{3}{8}$ " thread size.



SPECIFICATIONS

Capacity: Nuts, bolts, cap screws..... $\frac{3}{8}$ "
Blows per minute.....2,000
Overall length.....11 $\frac{3}{4}$ "
Weight: Net.....8 $\frac{1}{4}$ lbs.

Standard Equipment—3-conductor cable and plug; side handle with automatic-release switch; reversing switch; "universal" motor. Drive square— $\frac{1}{2}$ ".

Standard Voltages—110 or 220. On special order 125 or 240 volts.

Catalog No. 534. Impact Wrench only (specify voltage).....\$105.00

The Impact Wrench is also offered with a group of six hexagon sockets in sizes $\frac{9}{16}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ ", $\frac{13}{16}$ ", $\frac{7}{8}$ ", and $\frac{15}{16}$ ". These sockets are quickly interchangeable on the wrench and allow the unit to handle a great variety of nuts, bolts and cap screws.

Catalog No. 535. Impact Wrench with Socket Set (specify voltage). \$109.00



"ELECTRIC TOOL HEADQUARTERS"

STANDARD SCREW DRIVER BITS

With 7/16" Hex. Shanks—for No. 14 and No. 18 Drivers

For use with these Screw Types and Sizes	Bit Length	Bit and Stand- ard Finder Assem. No.	Price Each	Bit Only No.	Price Each	Stand- ard Finder No.	Price Each
Nos. 4, 5, 6, 7 Wood Nos. 4, 5, 6 Machine Nos. 4, 5, 6 Sheet Metal	2 1/2" 4" 6" 8" 10"	5345 15085 15086 15087 15088	\$1.55 2.05 2.15 2.25 2.35	5104 15049 15050 15051 15052	\$0.90 1.40 1.50 1.60 1.70	5103	\$0.60
Nos. 8, 9 Wood No. 6 Stove Nos. 7, 8 Sheet Metal No. 8 Machine No. 10 Filister	2 1/2" 4" 6" 8" 10"	5346 15089 15090 15091 15092	1.55** 2.05 2.15 2.25 2.35	5106 15053 15054 15055 15056	.90** 1.40 1.50 1.60 1.70	5105	.60
Nos. 10, 11 Wood No. 10 Sheet Metal No. 10 Machine (except Filister) No. 12 Filister	2 1/2" 4" 6" 8" 10"	5330 15093 15094 15095 15096	1.55** 2.05 2.15 2.25 2.35	5108 15057 15058 15059 15060	.90** 1.40 1.50 1.60 1.70	5107	.60
No. 12 Wood No. 12 Sheet Metal No. 12 Machine (except Filister) 1/4" Filister	2 1/2" 4" 6" 8" 10"	5343 15097 15098 15099 15100	1.55** 2.05 2.15 2.25 2.35	5110 15061 15062 15063 15064	.90** 1.40 1.50 1.60 1.70	5109	.60
No. 14 Wood No. 14 Sheet Metal 1/4" Machine (except Filister)	2 1/2" 4" 6" 8" 10"	5344 15101 15102 15103 15104	1.55** 2.05 2.15 2.25 2.35	5112 15065 15066 15067 15068	.90** 1.40 1.50 1.60 1.70	5111	.60
No. 16 Wood 5/16" Filister	2 1/2" 4" 6" 8" 10"	5329 15105 15106 15107 15108	1.55** 2.05 2.15 2.25 2.35	5114 15069 15070 15071 15072	.90** 1.40 1.50 1.60 1.70	5113	.60
No. 18 Wood 5/16" Sheet Metal	2 1/2" 4" 6" 8" 10"	5364 15109 15110 15111 15112	1.80 2.30 2.40 2.50 2.60	5116 16073 16074 16075 16076	.95 1.45 1.55 1.65 1.75	5115	.80
5/16" Machine (except Filister) No. 20 Wood 3/8" Filister	2 3/4" 4" 6" 8" 10"	5366 15113 15114 15115 15116	1.90 2.40 2.50 2.60 2.70	5118 15077 15078 15079 15080	1.00 1.50 1.60 1.70 1.80	5117	.85
No. 24 Wood 3/8" Machine (except Filister)	2 3/4" 4" 6" 8" 10"	5369 15117 15118 15119 15120	2.25 2.75 2.85 2.95 3.05	5120 15081 15082 15083 15084	1.10 1.60 1.70 1.80 1.90	5119	1.10

*All lengths shown are the projecting lengths, from chuck to end of bit; they do not indicate overall lengths.

**See quantity price table in next column.

BIT EXTENSIONS

Screw Driver Bit Extensions are available in various lengths, with 1/4" or 7/16" shank to fit Torsimeter, Scrugun or Screw Driver Chuck, and a chuck socket to take standard bits and socket wrenches. These Extensions greatly reduce bit replacement costs, where long bits are needed.

Cat. No.	Length	Shank Size	Price Each	Cat. No.	Length	Shank Size	Price Each
22581	4"	1/4"	\$1.80	15023	4"	7/16"	\$1.65
22539	6"	1/4"	1.80	14989	6"	7/16"	1.80
22540	8"	1/4"	1.90	5287	8"	7/16"	1.95
22323	10"	1/4"	1.90	5288	10"	7/16"	2.15

SCREW DRIVER BITS FOR PHILLIPS HEAD SCREWS FOR SCRUGUN, TORSIMETER, 14 AND 18 SCREW DRIVERS



A special bit is required for driving the Phillips head screw, which has a cross form slot instead of the conventional slot and four different slot sizes designated as Nos. 1, 2, 3 and 4.

SLOT SIZE	CAT. NO.	UNIT USED WITH	PRICE EACH	PRICE EACH BOX OF 6
No. 1	17922	Torsimeter and Scrugun	.70	.65
No. 1	18938	Nos. 14 and 18 S.D.	.90	.85
No. 2	17923	Torsimeter and Scrugun	.70	.65
No. 2	17924	Nos. 14 and 18 S.D.	.90	.85
No. 3	21366	Torsimeter and Scrugun	.70	.65
No. 3	17925	Nos. 14 and 18 S.D.	.90	.85
No. 4	17926	Nos. 14 and 18 S.D.	.90	.85

With 1/4" Hex. Shanks—For Torsimeter and Scruguns

For use with these Screw Types and Sizes	Bit Length	Bit and Stand- ard Finder Assem. No.	Price Each	Bit Only No.	Price Each	Stand- ard Finder No.	Price Each
Nos. 2, 3 Wood No. 2, 3 Machine No. 2 Sheet Metal No. 4 Filister	1 1/4" 2 3/4"	18051 22396	\$0.70** .90**	18050 22397	\$0.60 1.00	18050 22397	\$0.60 1.00
Nos. 4, 5, 6, 7 Wood No. 4, 5, 6 Machine Nos. 4, 5 Sheet Metal No. 6 Sheet Metal	1 1/4" 2 3/4" 5 1/4"	17690 22111	\$1.55** 1.90	17688 22108	.90** 1.25	13208 5103	.60 .60
Nos. 8, 9 Wood No. 6 Stove; 8 Mach Nos. 7, 8 Sheet Metal No. 10 Filister	1 1/4" 2 3/4" 5 1/4"	13207 13356 13469	.70** 1.55** 1.90	13207 13353 13470	.70** .90** 1.25	13207 5105 5105	.60 .60 .60
Nos. 10, 11 Wood No. 10 Sheet Metal No. 10 Machine No. 12 Filister	1 1/4" 2 3/4" 2 3/4"	18593	1.65**	18594	1.00**	15475 23494 5107	.60 1.00 .60
No. 12 Wood, Sheet Metal, Machine 1/4" Filister	1 1/4" 2 3/4"	21731	1.75**	21730	1.10**	16772 5109	.60 .60

**QUANTITY PRICES—Standard Bits and Bit-Finder Assemblies in this group are packed and stocked in boxes of six. We recommend ordering in standard packages or multiples thereof and offer special quantity prices which apply on designated quantities, all of one size only.

†Used with Scrugun only.

‡Used with Torsimeter and 90° heads.

One	In Box of Six	In 1/2-Gross Lot	In 1-Gross Lot	In 4-Gross Lot
\$0.70	\$0.55	\$0.50	\$0.45	\$0.40
.80	.65	.55	.50	.45
.90	.70	.65	.60	.50
1.00	.80	.70	.65	.55
1.10	.90	.80	.70	.60
1.25	1.20	1.10	1.00	.85
1.35	1.30	1.20	1.05	.90
1.75	1.40	1.30	1.15	1.00

SOCKET WRENCHES

Size Socket	Drive Opening	Cat. No. Hex. Socket	Price Each	Cat. No. Double Sq.	Price Each
1/4"	1/4"	20512	.70	20519	.85
5/16"	1/4"	20513	.70		
3/8"	1/4"	20514	.70	20520	.85
1/2"	1/4"	20515	.70		
5/8"	1/4"	20516	.70	20522	.85
3/4"	1/4"	20517	.70	20546	.85
7/8"	1/4"	20518	.75	22915	.90
1"	1/4"	22917	.80		
1 1/8"	1/4"	22762	.75	22763	1.00
1 1/4"	1/4"	22764	.75	22765	1.00
1 1/2"	1/4"	22766	.75	22767	1.00
1 3/4"	1/4"	22768	.75	22769	1.00
2"	1/4"	22770	.75	22771	1.00
2 1/8"	1/4"	22772	.75	22773	1.00
2 1/4"	1/4"	22774	.75	22775	1.00
2 3/8"	1/4"	22776	.75	22777	1.00
2 1/2"	1/4"	22778	1.00	22779	1.30
2 3/4"	1/4"	22780	1.00	22781	1.30
3"	1/4"	22782	1.00	22783	1.50
3 1/8"	1/4"	22784	1.25	22785	1.60
3 1/4"	1/4"	22786	1.35	22787	1.75
3 1/2"	1/4"	22788	2.00	22789	2.50
3 3/4"	1/4"	22790	2.25	22791	2.75
4"	1/4"	23298	3.50	23297	5.50
4 1/8"	1/4"	23300	3.50	23299	5.50
4 1/4"	1/4"	23302	4.00	23301	6.00
4 1/2"	1/4"	23304	4.50	23303	6.50
4 3/4"	1/4"	23306	5.00	23305	7.00
5"	1/4"	23308	5.00	23307	7.00
5 1/8"	1/4"	25943	5.50		



HEXAGON



DOUBLE SQUARE

SOCKETS FOR SMALL SHANKS



DOUBLE SQUARE



HEXAGON

SOCKETS FOR LARGE SHANKS



SHANKS

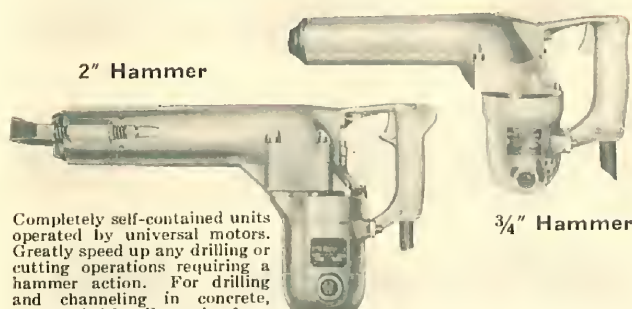
SHANKS

Size Sq. Drive	Size Hex. End	Overall Length	Catalog Number	Price Each
1/4"	1/4"	2"	20510	\$1.00
1/4"	1/4"	6"	20511	1.50
1/4"	1/4"	2 3/4"	22792	1.50
1/4"	1/4"	5"	22793	1.85
1/4"	1/4"	2 3/4"	22794	2.00
1/4"	1/4"	5"	22795	2.25
1/4"	1/4"	3"	22796	2.25
1/4"	1/4"	5"	22797	2.50
1/4"	1/4"	3"	22798	2.75
1/4"	1/4"	5"	22799	3.00

"ELECTRIC TOOL HEADQUARTERS"

Black & Decker

PORTABLE ELECTRIC HAMMERS



Completely self-contained units operated by universal motors. Greatly speed up any drilling or cutting operations requiring a hammer action. For drilling and channeling in concrete, stone or brick. Removing form marks from concrete surfaces. Caulking joints and seams in tanks, pipe lines, etc. Removing scale in boilers, tanks, etc.

1/2" PORTABLE ELECTRIC HAMMER

Efficient operating range..... 3/16" to 1/2"
Number of blows per minute..... 2400
Weight: Net..... 5 3/4 lbs. Shipping..... 15 lbs.
Overall length..... 12 3/4"
Price, complete, specify voltage—(Cat. No. 102)..... \$100.00

3/4" PORTABLE ELECTRIC HAMMER

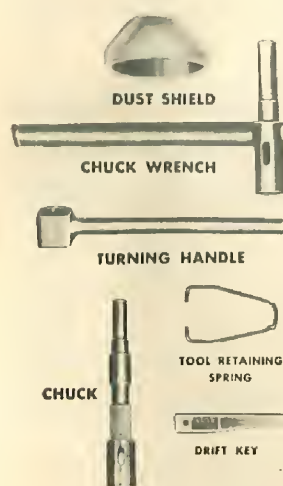
Efficient operating range..... 1/4" to 3/4"
Number of blows per minute..... 2300
Weight: Net..... 10 3/4 lbs. Shipping..... 22 lbs.
Overall length..... 14 5/8"
Price, complete, specify voltage—(Cat. No. 103)..... \$130.00

1 1/8" PORTABLE ELECTRIC HAMMER

Efficient operating range..... 3/4" to 1 1/8"
Number of blows per minute..... 2200
Weight: Net..... 19 1/4 lbs. Shipping..... 31 lbs.
Overall length..... 18 1/8"
Price, complete, specify voltage—(Cat. No. 104)..... \$160.00

2" PORTABLE ELECTRIC HAMMER

Efficient operating range..... 1 1/4" to 2"
Number of blows per minute..... 1950
Weight: Net..... 29 1/4 lbs. Shipping..... 44 lbs.
Overall length..... 20 1/4"
Price, complete, specify voltage—(Cat. No. 105)..... \$195.00
Standard Voltage—110 or 220. On special order 125 or 240 volts.
Universal Motors operate on A.C. or D.C.



HAMMER ACCESSORIES

Hammer Lubricating Oil

22926 3 oz. Can..... \$.30
22930 1 Pound Container..... .65
22931 2 Pound Container..... 1.25
32906 5 Pound Container..... 2.75

Carrying Cases

18296 for 1/2" Hammer..... \$10.00
18389 for 3/4" Hammer..... 12.00
21003 for 1 1/8" Hammer..... 15.00
18679 for 2" Hammer..... 17.00

Chuck Wrench-Turn Handle

For complete data on use see Master Catalog.

22587	Chuck Wrench	\$4.50
23806	Chuck Wrench	4.75
22749	Chuck Wrench	5.00
22754	Chuck Wrench	5.75
22510	Chuck Only	5.00
21726	Turning Handle	2.75

DRIFT KEY

Used to remove taper-shank bits from socket of Chuck Wrench.
Cat. No. 7276, for all Chuck Wrenches..... \$.35

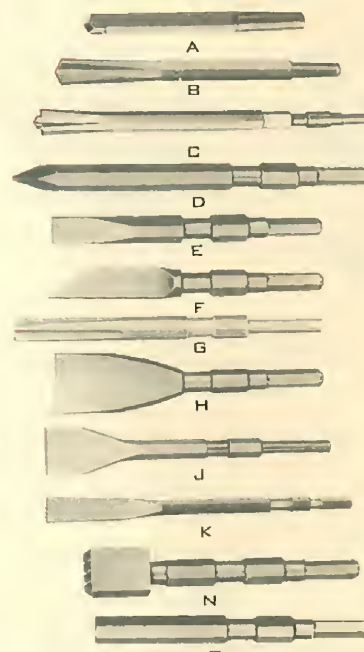
TOOL RETAINING SPRINGS

To hold straight-shank tools in nose piece of Hammer.
Cat. No. 10909, for 1/2" and 3/4" Hammers..... .15
Cat. No. 21750, for 1 1/8" Hammer..... .20

DUST SHIELDS

Used in over-head drilling to prevent dust from entering nose piece and mechanism of Hammer.
Cat. No. 17746, for Chuck Wrenches Nos. 22587, 23806 and 22510..... \$.35
Cat. No. 17747, for Chuck Wrenches Nos. 22749 and 22754..... .35

HAMMER TOOLS



STAR DRILLS (B and C)

Cat. No.	Size	Price
7167	1/4" x 5"	\$.65
7168	3/16" x 5"	.70
7160	5/8" x 5"	.70
7169	1/2" x 5"	.75
7161	1/2" x 9"	.75
9364	1/2" x 18"	1.15
7170	5/16" x 9"	.80
7162	5/8" x 9"	.80
9372	5/8" x 18"	1.30
7171	1 1/16" x 9"	.90
7163	3/4" x 9"	.90
9380	3/4" x 18"	1.40
9382	3/4" x 24"	1.80
24673	1 1/16" x 9"	.90
23081	3/4" x 9"	.90
23082	3/4" x 18"	1.40
23083	3/4" x 24"	1.80
7172	1 1/16" x 9"	1.00
7097	1 1/8" x 9"	1.00
9388	1 1/8" x 18"	1.60
9390	1 1/8" x 24"	2.00
7173	1 1/16" x 9"	1.10
7096	1" x 9"	1.10
9396	1" x 18"	1.60
9398	1" x 24"	2.00
10751	1 1/8" x 12"	1.35
10981	1 1/8" x 24"	2.25
21942	1 1/4" x 12"	2.35
21943	1 1/4" x 24"	3.00
21944	1 3/8" x 18"	2.65
21945	1 3/8" x 30"	3.50
21946	1 1/2" x 18"	2.85
21947	1 1/2" x 30"	3.75
21948	1 3/4" x 18"	3.25
21949	1 3/4" x 30"	4.25
21950	2" x 18"	3.75
21951	2" x 30"	4.75

SPEED BITS (A)

Cat. No.	Size	Price
23453	3/16" x 3"	*\$6.00
11363	1/4" x 3 1/2"	* 6.00
11364	3/16" x 3 3/4"	* 6.60
11365	3/16" x 4"	* 6.60
11366	1/8" x 4 1/2"	* 7.20
24024	1/2" x 5"	* 7.20
11367	1/2" x 9"	* 7.80
24025	3/16" x 5"	* 7.80
11368	3/16" x 9"	* 8.40
24026	5/16" x 5"	* 7.80
11369	5/8" x 9"	* 8.40

* Price per dozen.

SCALING CHISELS (J)

Cat. No.	Size	Price
12446	1 1/4" x 9"	2.15
17314	1 1/2" x 9"	2.25
17315	2" x 9"	2.35
12401	1 1/2" x 12"	2.40
22886	2" x 12"	2.50
22887	2 1/2" x 12"	4.25

COLD CHISELS (E)

Cat. No.	Size	Price
11108	5/8" x 8"	\$1.50
7095	3/8" x 9"	1.75
9405	3/4" x 20"	2.50

FLAT WOOD CHISEL (H)

Cat. No.	Size	Price
9039	2" x 9"	3.75

MISCELLANEOUS HAMMER TOOLS

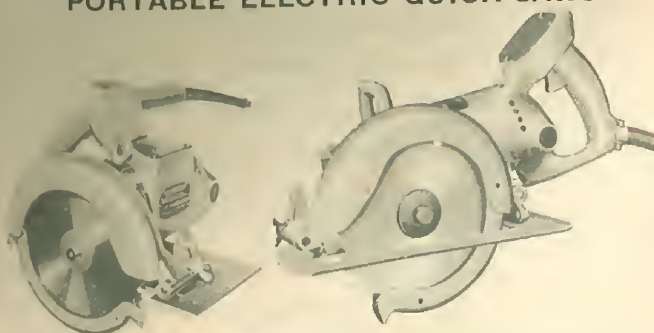
11107	7"	Tool Bank (O).....	\$1.15
7267	8"	Tool Bank (O).....	1.25
17232	9"	Seam Tool (F).....	2.25
9035	9"	Seam Tool (F).....	2.35
23804	10"	Bull Point (D).....	1.65
23805	18"	Bull Point (D).....	2.30
9036	12"	Bull Point (D).....	1.80
9410	20"	Bull Point (D).....	2.50
11624	8"	Bushing Tool (N).....	6.25
9040	9"	Bushing Tool (N).....	6.25
10684		Bushing Tool Head Only.....	4.75
17335	9"	4-Point Scaling Tool (G).....	2.25
32112	11 1/2" x 1 1/2"	Concrete Slotting Tool (K).....	3.60
32113	18" x 1 1/2"	Concrete Slotting Tool (K).....	4.30

Ask for Hammer Handbook, for complete information on construction, operation, and applications of Black & Decker Hammers.



"ELECTRIC TOOL HEADQUARTERS"

PORTABLE ELECTRIC QUICK-SAWS



Complete safety, adjustable depth of cut, adjustable angle; increased power, perfect balance, less weight, 2-pole instant release switch, sturdy gear and bearing construction; check these features of the Quick-Saw line.

7-inch PORTABLE QUICK-SAW (Depth of Cut—2 $\frac{3}{8}$ ")

The most widely useful size. Handles all popular lumber sizes.
Diameter Saw Blade, 7 $\frac{1}{4}$ " ; No-load Speed, 3200 R.P.M.
Maximum vertical depth of cut, 2 $\frac{3}{8}$ " .
Net weight, 18 $\frac{3}{4}$ lbs.; overall length, 17 $\frac{1}{2}$ " ; shipping weight, 38 lbs.
Price, complete, specify voltage—(Cat. No. 260).....\$125.00

8-inch PORTABLE QUICK-SAW (Depth of Cut—2 $\frac{5}{8}$ ")

Especially adapted for quick cut-off work; well balanced for one-hand operation.
Diameter Saw Blade, 8 $\frac{1}{8}$ " ; No-load Speed, 5000 R.P.M.
Maximum vertical depth of cut, 2 $\frac{5}{8}$ " .
Net weight, 20 $\frac{3}{4}$ lbs.; overall length, 13 $\frac{1}{4}$ " ; shipping weight, 45 lbs.
Price, complete, specify voltage—(Cat. No. 382).....\$145.00

9-inch PORTABLE QUICK-SAW (Depth of Cut—3 $\frac{1}{8}$ ")

A popular large size unit for work requiring greater depth of cut.
Diameter Saw Blade, 9 $\frac{1}{4}$ " ; No-load Speed, 2500 R.P.M.
Maximum vertical depth of cut, 3 $\frac{1}{8}$ " .
Net weight, 26 lbs.; overall length, 19 $\frac{1}{4}$ " ; shipping weight, 54 lbs.
Price, complete, specify voltage—(Cat. No. 375).....\$155.00

STANDARD EQUIPMENT: (all units) 3-wire cable and plug, Combination Rip and Cross Cut Blade, Carrying Case. Universal Motors, operate on A.C. or D.C.

Standard Voltage—110 or 220. On special order 125 or 240 volts.

NEW QUICK-SAW ARM

Quick-Saw Arm quickly converts portable Quick-Saw to versatile radial Saw; multiplies utility of portable saw, improves speed and accuracy on any of these cuts: cross-cut, mitre, bevel, compound angle, ripping.

Quick-Saw Arm clamps to carpenter's saw horse or table. All Quick-Saws fit the adjustable Saw Carriage and all depth and angle adjustments of Saw can be made while in the Arm. Height, angle and balance adjustments of Saw Arm are quickly made and regulated on the work-head column.

Net Weight (Quick-Saw Arm only), 42 $\frac{1}{2}$ lbs.

Maximum Travel on cutting stroke, 20 $\frac{1}{2}$ " .

Depth of cut—2 $\frac{1}{4}$ " with 7" Quick-Saw

2 $\frac{1}{2}$ " with 8" Quick-Saw

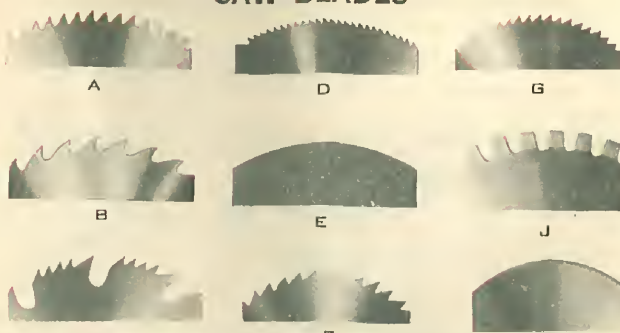
3" with 9" Quick-Saw

Angle of cut—0° to 180°

Bevel Angle—0° to 45°

Catalog No. 31617. Price complete\$148.00

SAW BLADES



CROSSCUT BLADE (A)

Designed for fast, smooth cross-cutting. Makes a smoother cut than the Combination Blade furnished as standard equipment.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
19773	7 $\frac{1}{4}$ "	7-inch	\$5.25
23160	8 $\frac{1}{8}$ "	8-inch	6.50
22740	9 $\frac{1}{4}$ "	9-inch	7.35

NON-FERROUS METAL CUTTING BLADE (D)

This Blade is for use on non-ferrous metals only. Has teeth shaped and set especially for cutting soft, light gauge non-ferrous metals, including lead.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
21868	7 $\frac{1}{4}$ "	7-inch	\$5.85
24073	8 $\frac{1}{8}$ "	8-inch	7.00
22744	9 $\frac{1}{4}$ "	9-inch	7.65

NAIL CUTTING BLADE (F)

For opening boxes and crates, ripping up floors, where nails are encountered.

Cat. No.	For Saw	Price
20360	7-inch	\$ 8.25
23159	8-inch	9.35
22741	9-inch	10.00

FRICTION SAW BLADE (J)

For cutting corrugated galvanized sheet. Cuts faster, with less dirt than abrasive disc. Blade is taper-ground for clearance.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
24771	6"	7-inch	\$ 7.00
24772	7"	8-inch	7.90
24773	8"	9-inch	8.75

WET ATTACHMENT

Forked nozzle sprays water against both sides of blade—control valve regulates spray. Complete with 10 Ft. length of hose and a fitting which couples to standard type water faucet.
31006—Wet Attachment\$12.00

COMBINATION RIP AND CROSSCUT BLADE (B)

A particularly fast cutting blade for ripping in all kinds of wood, and for general service cross-cutting. Proper size supplied as standard equipment with all Electric Saws.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
19774	7 $\frac{1}{4}$ "	7-inch	\$5.25
23161	8 $\frac{1}{8}$ "	8-inch	6.50
22728	9 $\frac{1}{4}$ "	9-inch	7.35

PLANER OR MITRE BLADE (C)

For making very smooth cuts, both rip and cross-cut, on interior finish and trim.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
20362	7 $\frac{1}{4}$ "	7-inch	\$ 8.25
23158	8 $\frac{1}{8}$ "	8-inch	10.00
22743	9 $\frac{1}{4}$ "	9-inch	11.25

ABRASIVE DISC (E)

For sawing and cutting slate, marble, asbestos, tile, Transite, and porcelain.

Cat. No.	For Saw	Price
19766	7-inch	\$2.65
11947	8-inch	2.95
22739	9-inch	3.65

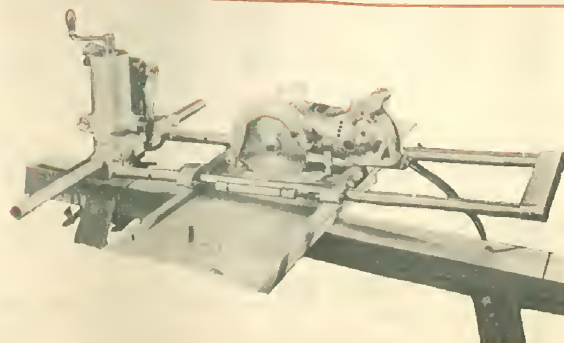
For hard ferrous metals in thin gauges

Cat. No.	For Saw	Price
23582	7-inch	\$2.65
23583	8-inch	2.95
23584	9-inch	3.65

Diamond RIM BLADES (K)

For cutting concrete, transite, asbestos cement, siding and roofing, tile, etc. Longer life than abrasive disc with no tendency to break. Copper disc with diamond particles locked into the rim. USE WITH WET ATTACHMENT.

Cat. No.	Dia.	Thick-ness	Price Each
30846	7"	.040	\$ 9.00
30847	7"	.050	12.00
30848	8"	.050	13.20
30849	8"	.064	15.60
30850	9"	.050	14.40
30851	9"	.064	18.00

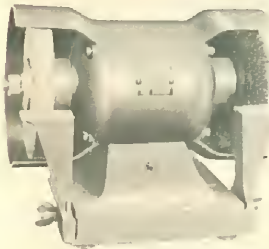


"ELECTRIC TOOL HEADQUARTERS"

Black & Decker

BENCH GRINDERS are equipped with ball bearings, protected from dust and set to minimize spindle vibration; tool rests adjustable for wheel wear; strong wheel guards, completely enclosed (except on 6" Standard); wide, sturdy base with rubber feet; adjustable spark shields on 8" and 10" Grinders. Heavy-Duty Grinders can be equipped with eye shields and pedestals; and can be used as combination grinders for grinding and wire brushing. Motors are not universal; supplied only for voltages and currents listed under each unit. Spindle no-load speeds are: 25 cycle, 1500 R.P.M.; 50 cycle, 3000 R.P.M.; 60 cycle, 3600 R.P.M.; (except 10" unit, which is 50 cycle, 1500 R.P.M.; 60 cycle, 1800 R.P.M.).

6" STANDARD BENCH GRINDER



Wheel size, 6" x 5/8" x 1/2".
Net weight, 31 1/2 lbs.
Motor Rating, 1/4 H.P.
(1/2 H.P. for 25 cycle).
For all standard A.C. 1-phase
volts and cycles only. Not
for D.C.
Standard Equipment—1
grinding wheel and 1 wire
wheel brush.

Price, complete, specify voltage and cycle.....\$38.00

6" HEAVY DUTY BENCH GRINDER



Wheel size, 6" x 3/4" x 1/2". Net
weight, 45 lbs.
Motor Rating, 1/2 H.P.
Supplied for 50-60 cycle, 1 phase A.C.
110 or 220 volts.
Standard Equipment—2 grinding
wheels; 1 medium, 1 fine.
(Wheel guards are wide enough to
accommodate a standard 3-section
wire wheel brush without any change
in the guard).

Price, complete, specify voltage and cycle—(Cat. No. 67).....\$58.00

ILLUMINATED EYE SHIELDS

New Illuminated Eye Shields have been developed for use with our 6" Heavy Duty, 8" and 10" Bench Grinders. Shields are furnished with adjustable brackets and bolts for attachment to the Wheel Guards. Glass is shatter proof and work is illuminated from both sides of the eye shield. If the grinder is of voltage other than 110 or 220, eye shields may be purchased with individual cords, plugs and switches for use in 110 or 220 volt receptacles. Otherwise, the eye shields may be operated with the main grinder switch.

Cat. No. 30050 An assembly of a pair of 110 volt illuminated Eye Shields, to be connected to and operated by the 110 volt Bench Grinder switch.....\$19.00

Cat. No. 30051 An assembly of a pair of 220 volt illuminated Eye Shields, to be connected to and operated by the 220 volt Bench Grinder switch.....\$19.00

Cat. No. 30142 An assembly of a pair of 110 volt illuminated Eye Shields, with cord, plug and switch, operated independently of the Bench Grinder switch.....\$20.00

Cat. No. 30143 An assembly of a pair of 220 volt illuminated Eye Shields, with cord, plug and switch, operated independently of the Bench Grinder switch.....\$20.00

Cat. No. 30144 An assembly of a single 110 volt illuminated Eye Shield, with cord, plug and switch, operated independently of the Bench Grinder switch.....\$10.50

Cat. No. 30145 An assembly of a single 220 volt illuminated Eye Shield, with cord, plug and switch, operated independently of the Bench Grinder switch.....\$10.50

FOR ALL BENCH GRINDERS
Cat. No. Item Price
19115 Cutter Type Wheel dresser.....\$ 1.40
21961 Diamond Wheel dresser 5.00

FOR 6" BENCH GRINDERS
6405 1/2" Thrd. Chuck R.H.....\$ 8.00
6664 Spindle Ext. R.H..... 4.00
6665 Spindle Ext. L.H..... 4.00
3564 Tprd. Buff Spindle L. H. 5.00
3565 Tprd. Buff Spindle R.H. 5.00

FOR 8" BENCH GRINDERS
Cat. No. Item Price
6666 Spindle Ext. R.H.....\$ 5.50
6667 Spindle Ext. L.H..... 5.50

FOR 10" BENCH GRINDERS
12297-C Spindle Ext. R.H.....\$ 8.00



PEDESTAL

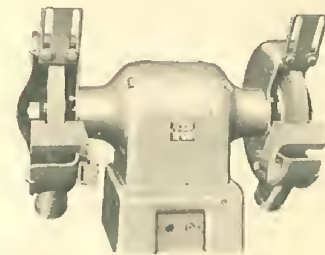
For 6" & 8" Grinders

\$28.00

For 10" Grinder

\$32.00

8" BALL BEARING BENCH GRINDER



Wheel size, 8" x 1/2" x 5/8". Net weight, 82 lbs.

Motor Rating, 3/4 H.P.

Standard Equipment—2 Grinding Wheels; 1 med., 1 fine.

Motor not universal. Not available for direct current. Supplied in standard voltages and currents as follows:

Voltage.....	110 or 220	220 or 440
Phase.....	1	3
Cycle.....	50-60	50-60

Price, specify voltage, phase and cycle.....\$98.00

10" BALL BEARING BENCH GRINDER

Wheel Size, 10" x 1" x 3/4".
Net Weight, 120 lbs.

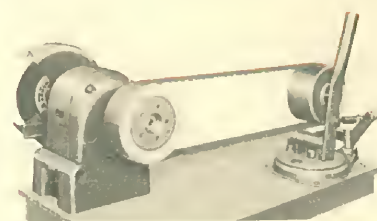
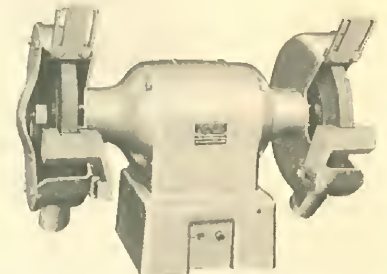
Motor Rating, 1 H.P., (3/4 H.P. for 25 cycle).

Standard Equipment—2 Grinding Wheels, 1 med.; 1 coarse.
Motor, not Universal. Not available for direct current.

Supplied in standard voltages and current as follows:

Voltage.....	110, 220	220, 440
Phase.....	1	3
Cycle.....	25, 50-60	50-60

Price, specify voltage, phase and cycle.....\$138.00



BENCH BACK-STAND GRINDING

The Back-Stand Grinding method employs a belt, bringing many square inches of abrasive in contact with the work. Longer abrasive life results in cooler grinding. A compress contact wheel, mounted on the grinder spindle, has a cushioning action allowing the abrasive belt to conform to the shape of the piece being ground. Idler unit has swivel and tension adjustments; can be used on right or left hand side of grinder.

BACK STAND IDLER ASSEMBLY

Cat. No. 30328.....\$37.50

COMPRESS CONTACT WHEELS

Catalog No. 30897 6" x 2 1/2" x 5/8" Contact Wheel for use on 8" Bench Grinder.....\$15.00

Catalog No. 30898 8" x 2 1/2" x 3/4" Contact Wheel for use on 10" Bench Grinder.....\$19.40

GRIT ABRASIVE BELTS

Catalog No. 32922 60" x 2 1/2" x No. 24 Grit Abrasive Belt.....	\$.72
Catalog No. 31028 60" x 2 1/2" x No. 36 Grit Abrasive Belt.....	.66
Catalog No. 31029 60" x 2 1/2" x No. 80 Grit Abrasive Belt.....	.54
Catalog No. 31030 60" x 2 1/2" x No. 150 Grit Abrasive Belt.....	.52



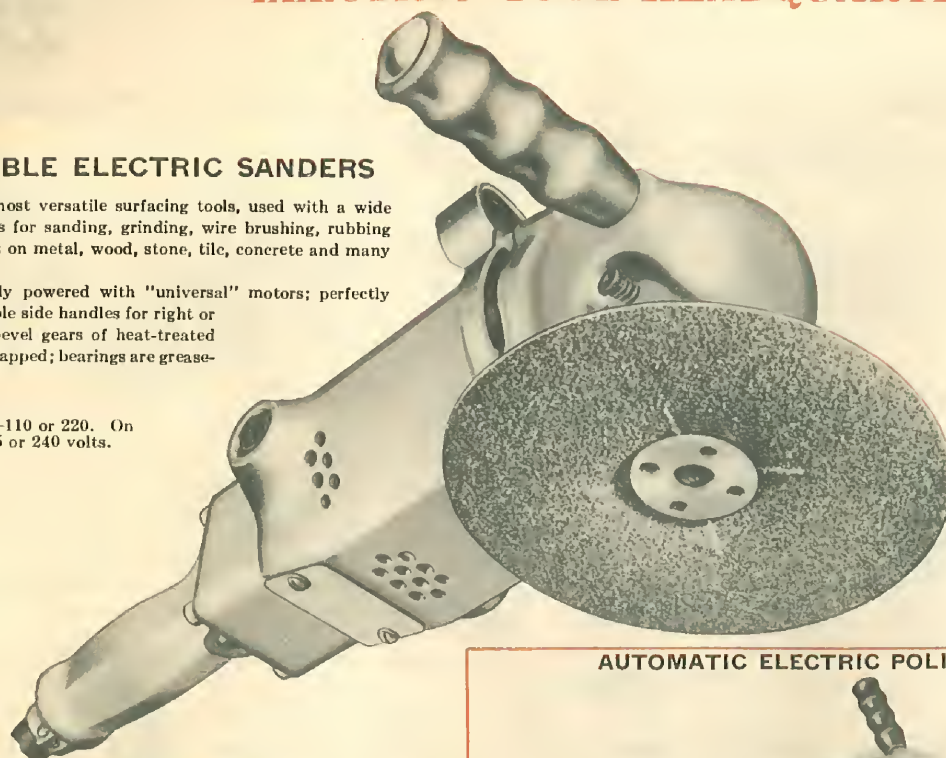
"ELECTRIC TOOL HEADQUARTERS"

PORTABLE ELECTRIC SANDERS

Electric Sanders are most versatile surfacing tools, used with a wide variety of attachments for sanding, grinding, wire brushing, rubbing and planing operations on metal, wood, stone, tile, concrete and many other surfaces.

These Sanders are fully powered with "universal" motors; perfectly balanced, with reversible side handles for right or left hand use; spiral bevel gears of heat-treated alloy are matched and lapped; bearings are grease-sealed.

Standard Voltage—110 or 220. On special order 125 or 240 volts.



7" STANDARD SANDER
(EQUIPPED WITH SPINDLE LOCK)
SHOWN ABOVE

Ample powered and constructed for constant production service on all types of metal and wood surfacing.

Diameter of disc.....	7"
No-load speed.....	4200 R.P.M.
Weight: Net.....	12¾ lbs.
Shipping.....	16½ lbs.
Overall length (not including pad).....	17½"
Price, complete, specify voltage—(Cat. No. 92).....	\$67.00

7" HEAVY DUTY SANDER
(EQUIPPED WITH SPINDLE LOCK)



Designed to meet the demand for a universal motored sander of superior power for production metal finishing.

Diameter of disc.....	7"
No-load speed.....	4200 R.P.M.
Weight: Net.....	14¼ lbs.
Shipping.....	21½ lbs.
Overall length (not including pad).....	18"
Price, complete, specify voltage—(Cat. No. 93).....	\$76.00

9" HEAVY DUTY SANDER
(EQUIPPED WITH SPINDLE LOCK)



A new Heavy Duty tool designed for constant production-line use with 9-inch abrasive discs. New, fast spindle lock for quicker change of pads and abrasive discs. Spiral-bevel gears. Switch and commutator sealed against dust and grit. Bearings also grease-sealed against dust and dirt.

Diameter of disc.....	9"
No-load speed.....	4000 R.P.M.*
Weight: Net.....	18¾ lbs.
Shipping.....	25 lbs.
Overall length (not including pad).....	19½"
Price, complete, specify voltage—(Cat. No. 433).....	\$92.00

*Optional Speed—5000 R.P.M.—No extra cost.

AUTOMATIC ELECTRIC POLISHER



Equipped with reservoir, thumb-operated pump and feeder tube which automatically applies Power-Glaze to the car surface while working. No stopping for hand application; no drying of liquid. Uniform results, more jobs per day. Increased power, correct speed, more torque, light weight.

No-load Speed, 1500 R.P.M.; Diameter of Pad, 7".
Net weight, 10¾ lbs.; overall length, 17½".
Price, complete, specify voltage—(Cat. No. 97).....\$82.00

STANDARD ELECTRIC POLISHER



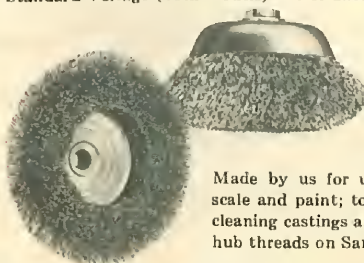
Excellent unit for smaller shops. Does not have automatic-feed feature (liquid must be applied by hand). Especially adapted to rubbing-down new paint and lacquer; for buffing and cleaning all metal and wood surfaces and waxing.

No-load Speed, 1500 R.P.M.; Diameter of Pad, 7".
Net weight, 9¼ lbs.; overall length, 15½".
Price, complete, specify voltage—(Cat. No. 96).....\$68.00

Equipment for both Polishers includes flexible rubber pad; sponge rubber cushion pad; lambswool buffing bonnet.

Standard Voltage (both models) 110 or 220. On special order 125 or 240.

WIRE CUP BRUSHES



Made by us for use on Sanders to remove rust, scale and paint; to clean tanks and boat hulls; for cleaning castings and structural steel ¾"-11 thread hub threads on Sander spindle.

No. 18056 4" Wire Cup Brush, for 7" Standard Sander.....	\$2.50
No. 24353 5" Wire Cup Brush for 7" Heavy Duty Sander.....	3.00
No. 12398 6" Wire Cup Brush for 9" Heavy Duty Sander.....	3.50

"ELECTRIC TOOL HEADQUARTERS"

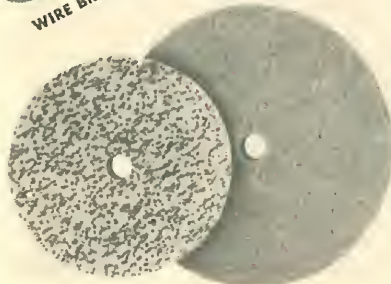
Black & Decker



WIRE BRUSHES

GRINDING WHEELS

ROTARY PLANER HEADS



SANDING DISCS

Sanding and abrasive discs can be furnished in a variety of grades and grains. Discs designated as "Open Grain" are especially suited for wood sanding (Nos. 16, 24 and 36 for removing paint and varnish); "Closed Grain" discs are for metal work.

GRADE — Closed Grain	7-INCH SANDING DISCS			9 1/2-INCH SANDING DISCS		
	Cat. No.	List Price		Cat. No.	List Price	
		Each	Per 100		Each	Per 100
16	17815	\$0.53	\$52.20	26458	\$0.70	\$69.60
24	9990	.41	40.60	10719	.55	54.20
36	9991	.40	39.70	10720	.54	53.20
50	9992	.38	37.20	12153	.50	49.40
60	18489	.36	35.20	18493	.48	47.20
80	10485	.34	33.30	10721	.45	44.30
100	12145	.34	33.30	12149	.45	44.30
120	12146	.34	33.30	12150	.45	44.30
150	12147	.34	33.30	12151	.45	44.30
180	12148	.34	33.30	12152	.45	44.30
Open Grain						
16	15134	.53	52.20	15137	.70	69.60
24	15135	.41	40.60	15138	.55	54.20
36	15136	.40	39.70	15139	.54	53.20
50	12011	.38	37.20	12131	.50	49.40
60	18491	.36	35.20	18495	.48	47.20
80	12012	.34	33.30	12132	.45	44.30
120	12013	.34	33.30	12133	.45	44.30

All discs packed 25 to a box.



REPLACEMENT SANDER PADS AND PARTS

All pads and replacement assemblies are interchangeable on all Sanders and Polishers as the spindle diameter and thread is the same for all units of this group; 5/8"—11 thread.

No. 22589 5" Moulded Rubber Pad.....	\$2.50
No. 17687 7" Moulded Rubber Pad, complete.....	3.00
No. 18329 7" Heavy Duty Moulded Rubber Pad.....	3.50
No. 18330 9" Moulded Rubber Pad.....	5.50
No. 14237 3" Flexible Pad, complete.....	3.50
No. 14551 Replacement Pad for 3" Flexible Pad.....	1.15
No. 10279 Clamp Washer.....	.40

"KOOLFLEX" BACKING PADS



Light-weight, fabric-base, plastic-bonded discs provide greater flexibility, cooler operation and longer life on sanding applications. Used with No. 22589 Moulded Rubber Pad. For maximum flexibility, use one "Kooflex" pad with corresponding size abrasive disc. For "feathering" finish, use No. 31000 "Kooflex" pad with 9" abrasive. For more rigid backing use both sizes of "Kooflex" pads with 9" abrasive. Use with Special Clamp Washers listed below.

No. 31000 6 3/4" "Kooflex" Backing Pad.....	\$1.50
No. 31001 8 3/4" "Kooflex" Backing Pad.....	2.00
No. 31003 Spec. Clamp Washer—use either pad.....	.45
No. 31004 Extra-long Clamp Washer, to be used when both "Kooflex" pads are used.....	.50

ABRASIVE DISC TRIMMER



Facilitates the complete use of abrasive discs, cutting them down to smaller diameters as outer surface is used up. Trimmer has adjustable center hole pilot on a calibrated swinging arm; a cutting wheel mounted on one-piece spindle and crank, and a base casting which can be screwed down to the bench.

No. 21808 Abrasive Disc Trimmer, complete.....	\$8.50
No. 21753 Replacement Cutter.....	.40

SANDER AND POLISHER ATTACHMENTS • ACCESSORIES

SAUCER GRINDING WHEEL

For some metal grinding applications, the Sander equipped with a Saucer Grinding Wheel does smoother and faster work than a Portable Grinder. Saucer Wheels have 5/8"—11 thread bushing to fit spindle direct.

No. 24050 4" Saucer Grinding Wheel (for 7" Std. Sander).....	\$4.85
No. 23444 5" Saucer Grinding Wheel (for 7" H.D. Sander).....	6.90
No. 18039 6" Saucer Grinding Wheel (for 9" H.D. Sander).....	9.00
No. 17329 Skirt Wheel Guard for H.D. Sanders.....	6.50

CUP GRINDING WHEEL

For smoothing welds and other metal surfaces. Use No. 10711 Spindle Extension to attach to Sander.

No. 10663 4" Cup Grinding Wheel (Grade 36-H).....	\$2.10
No. 10711 Spindle Extension.....	2.25

LAMBSWOOL BUFFING PAD AND BONNET

For cleaning and buffing lacquered finishes and for obtaining final high lustré after spraying. Attached direct to flexible pad of Polisher.



No. 13086 Lambswool Buffing Pad for 7" Polisher individually boxed, each.....	\$1.55
packed 6 to a carton, each.....	1.35
No. 13087 Lambswool Buffing Bonnett with Hood and Drawstring.....	2.15
No. 22176 Lambswool Buffing Bonnett (for use with Sponge Rubber Cushion).....	2.70
No. 22174 7" Sponge-rubber Cushion.....	1.25
No. 22191 Long Clamp Washer only, for Sponge-rubber Cushion.....	.45

RUBBING PADS

For rubbing down orange peel in lacquer finishes, etc. Attaches direct to flexible pad of Polisher.

No. 20619 7" Pile Fabric Rubbing Pad.....	\$1.65
No. 21207 9 1/4" Pile Fabric Rubbing Pad.....	2.30
No. 10661 Felt Rubbing Pad for 7" Polisher or 7" Sander.....	1.75
No. 10709 Felt Rubbing Pad for 9" Sander.....	2.50

POWER RUBBING COMPOUND

Applied with Polisher equipped with pile fabric pad, will quickly remove "orange peel" and spray pits from newly lacquered surfaces, giving a smoother, more uniform surface.

No. 31459 1-gal. container Power Rubbing Compound.....	per gal. \$2.25
Case of six 1-gallon containers.....	per gal. 1.95

POWER GLAZE

A special car-body cleaning and buffing compound, chemically and mechanically correct for use with Polishers. Cleans, burnishes and seals the surface in one quick, easy operation, leaving a hard, glazed surface with pores sealed against oxidation and corrosion. Use Heavy-Duty Power-Glaze for cars heavily coated with road scum, or with pigment deterioration. Standard Duty Power-Glaze gives best results on new cars or car surfaces in relatively good condition.

No. 31461 Heavy-Duty, Power-Glaze.....	per gal. \$2.85
Case of six 1-gallon containers.....	per gal. 2.45
No. 32486 Standard Duty Power-Glaze.....	per gal. 2.85
Case of six 1-gallon containers.....	per gal. 2.45

POWER WAX

Power Wax used with the Polisher produces a hard, brilliant, waxed finish. Ideal for new or newly lacquered cars or to give an extra protective coating to cars cleaned with Power Glaze.

No. 31463 1-quart can of Power-Wax.....	per qt. \$1.50
Case of six 1-quart containers.....	per qt. 1.30

ROTARY PLANER HEADS

Perform many wood surfacing and shaping operations formerly done with jack-plane and adz. Two types of planer head are supplied; one with rounded surface for deep gouging, the other with flat face for surfacing and semi-finishing. These heads are interchangeable on the spindle of the 7" Heavy-Duty and 9" Heavy Duty Sander. For smoothing and fitting joints in concrete forms; surfacing boat hulls and decks, piers, floors, etc.; beveling and shaping beams and timbers, etc.

No. 14743 Set of two 5" Planer Heads, one Gouging and one Surfacing, complete with blades, packed in neat oak box.....	\$28.00
No. 14734 5" Gouging Planer Head, complete with blades.....	13.00
No. 14735 5" Surfacing Planer Head, complete with blades.....	13.00
No. 14733 Replacement Blade, Set of 3.....	1.90



"ELECTRIC TOOL HEADQUARTERS"

ELECTRIC DIE GRINDERS

For die shops, stamping plants, tool rooms; compact, powerful, rugged; equipped with $\frac{1}{4}$ " single purpose chuck adaptable to variety of shaped wheels and burrs. Supplied with either bonnet grip or extended handle.

2" DIE GRINDER



Maximum Wheel Size*, $2\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{2}$ "; No-load Speed, 19,000 R.P.M.
 Net weight, $2\frac{1}{2}$ lbs.; overall length, 9", with end handle $14\frac{3}{4}$ ".
 Price, standard unit with end cap—(Cat. No. 288).....\$50.00
 Price, with extended end handle—(Cat. No. 289)..... 53.00
 Replacement and Extra Equipment—
 No. 20330 2" High-speed bonded Grinding Wheel.....\$1.25
 No. 20353 2" Wheel Guard..... 2.25
 No. 21757 Wheel Arbor..... 1.50
 No. 20285 Double End Wrench ($\frac{3}{16}$ " and $\frac{11}{16}$ ")..... .25
 No. 21755 $\frac{1}{4}$ " S. A. Chuck with $\frac{1}{8}$ " Reducing Sleeve..... 4.50
 No. 21955 $\frac{1}{8}$ " Reducing Sleeve Only, for No. 21755 Chuck..... 1.00
 No. 20846 Tool Post Holder..... 6.50

2½" DIE GRINDER



Maximum Wheel Size*, $2\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{2}$ "; No-load Speed, 17,500 R.P.M.
 Net weight, 4 lbs.; overall length, $12\frac{1}{4}$ ", with end handle $16\frac{1}{2}$ ".
 Price, standard unit with Bonnet Cap, Switch in Cap—(Cat. No. 291), specify voltage.....\$55.00
 Price, with Extended switch handle—(Cat. No. 290), specify voltage.... 58.00

REPLACEMENT AND EXTRA EQUIPMENT

No. 20329 $2\frac{1}{2}$ " High Speed Bonded Grinding Wheel.....\$1.35
 No. 26537 $2\frac{1}{2}$ " Wheel Guard..... 2.75
 No. 26361 Outer Wheel Washer..... 1.00
 No. 26362 Inner Wheel Washer..... .50
 No. 20285 Double End Wrench ($\frac{3}{16}$ " and $\frac{11}{16}$ ")..... .25
 No. 26533 $\frac{1}{4}$ " S. A. Chuck with $\frac{1}{8}$ " Reducing Sleeve..... 4.50
 No. 21955 $\frac{1}{8}$ " Reducing Sleeve only for No. 26533 Chuck..... 1.00
 No. 26530 Tool Post Holder..... 6.50

3" DIE GRINDER



Maximum Wheel Size*, 3 " x $\frac{1}{2}$ " x $\frac{3}{8}$ "; No-load Speed, 16,000 R.P.M.
 Net weight, 7 lbs.; overall length, $17\frac{3}{4}$ "; shipping weight $11\frac{1}{4}$ lbs.
 Price, with extended end handle—(Cat. No. 499), specify voltage.....\$60.00

*No wheels are supplied as standard equipment with Die Grinders. Wheel Guards, Wheel Arbors and maximum size Grinding Wheels can be furnished at extra cost. Ask your jobber about variety of mounted wheels and burrs for use with these units.

3" PORTABLE GRINDER



Wheel Size, 3 " x $\frac{1}{2}$ " x $\frac{3}{8}$ "; No-load speed, 16,000 R.P.M.
 Net weight, 8 lbs.; overall length, $16\frac{3}{4}$ ".
 Price, complete, specify voltage—(Cat. No. 395).....\$60.00
 Standard Voltage (above units); 110 or 220. On special order 125 or 240 volts.

REPLACEMENT AND EXTRA EQUIPMENT FOR 3" DIE GRINDER AND 3" PORTABLE GRINDER

No. 24317 3" High Speed Bonded Grinding Wheel.....\$1.60
 No. 31457 3" Wheel Guard Assembly, complete..... 3.00
 No. 31456 Clamp Nut..... .75
 No. 20285 Double End Wrench ($\frac{3}{16}$ " x $\frac{11}{16}$ ")..... .25
 No. 24187 $\frac{1}{4}$ " S. A. Chuck with $\frac{1}{8}$ " Reducing Sleeve..... 4.50
 No. 21955 $\frac{1}{8}$ " Reducing Sleeve only for No. 24187 Chuck..... 1.00

HEAVY-DUTY PORTABLE GRINDERS

Complete line with most advanced features. Splined gear mountings, steel inserts for bearings, welded steel wheel guards; dust-sealed commutators and switches; ball-bearings set at spindle ends absorb side thrust; shaped grips and switch handles improve control. All grinders furnished with correct size grinding wheel.

4" PORTABLE GRINDER



Wheel Size, 4 " x $\frac{3}{4}$ " x $\frac{1}{2}$ "; No-load Speed, 5250 R.P.M.
 Net weight, $13\frac{1}{4}$ lbs.; overall length, $20\frac{1}{2}$ "; shipping weight 18 lbs.
 Price, complete, specify voltage—(Cat. No. 59).....\$70.00

5" PORTABLE GRINDER



Wheel Size, 5 " x $\frac{3}{4}$ " x $\frac{1}{2}$ "; No-load Speed, 4500 R.P.M.
 Net weight, $15\frac{1}{2}$ lbs.; overall length, $23\frac{1}{2}$ "; shipping weight, 21 lbs.
 Price, complete, specify voltage—(Cat. No. 60).....\$80.00

6" PORTABLE GRINDER



Wheel Size, 6 " x 1 " x $\frac{3}{8}$ "; No-load Speed, 3800 R.P.M.
 Net weight, 20 lbs.; overall length, 25"; shipping weight, 26 lbs.
 Price, complete, specify voltage—(Cat. No. 61).....\$100.00

Standard Voltage—110 or 220. On special order 125 or 240 volts.

Standard Equipment—For 4", 5" and 6" Grinders—3-conductor cable and plug (3rd wire for grounding); dust-sealed plunger switch; grip end handle; adjustable steel wheel guard and one grinding wheel.

Standard Voltage—110 or 220. On special order 125 or 240 volts. Wheel Rotation—Counter-clockwise, facing wheel-end.

GLUE POTS



Especially designed for continuous use where maintenance of constant working temperature is important. Thermostatic control brings the temperature of the glue up to 150° Fahrenheit rapidly, and maintains it at that temperature without variation of more than 5° . Nichrome heating element hermetically sealed and protected against moisture and foreign substance. Ideal for use with book binderies, printing plants, furniture and cabinet factories, toy factories, piano factories, etc. Capacity of glue container—2 quarts.

Weight: Net..... $14\frac{1}{2}$ lbs. Shipping..... 16 lbs.
 Price, complete, specify Alternating Current voltage—(Cat. No. 89).... \$25.00
 Price, complete, specify Direct Current voltage—(Cat. No. 487)..... 26.50
 Supplied for 110 or 220 volts.

"ELECTRIC TOOL HEADQUARTERS"

Black & Decker

WHIRLWIND WIRE WHEEL BRUSHES



WHIRLWIND wire wheel brushes give you more brush for your money. More wire per section—closely packed—securely anchored—for long life on heavy duty work. More quality—highest grades of wire—carefully selected and tested. More variety of sizes and types—one, two- or three-sections—three wire sizes—six diameters—interchangeable arbor hole adaptors—fit any arbor or spindle.

.014" WIRE DIAMETER SIZE

BRUSH DIAM.	No. OF SECTS.	BRUSH WIDTH		ARBOR ADAPTOR*	CATALOG NUMBER	PRICE EACH*
		Hub	Face			
4"	1	7/16"	5/8"	1/2"	23200	\$1.00
	2	1 1/16"	7/8"		23201	1.20
	3	1"	1 1/8"		21397	1.55
6"	1	7/16"	3/4"	1/2"	23202	1.20
	2	1 1/16"	1"		23203	1.65
	3	1"	1 3/8"		21401	2.20
7"	1	7/16"	3/4"	5/8"	23204	1.65
	2	1 1/16"	1"		23205	2.30
	3	1"	1 3/8"		21411	3.10
8"	1	7/16"	7/8"	5/8"	23206	1.70
	2	1 1/16"	1 1/8"		23207	2.65
	3	1"	1 1/2"		21405	3.55
10"	4	1 3/16"	1 3/8"	3/4"	21407	5.95
12"	4	1 3/8"	2 3/4"	1 1/4"	21409	7.30

.0118" WIRE DIAMETER SIZE

4"	1	7/16"	5/8"	1/2"	27000	1.00
	2	1 1/16"	7/8"		27001	1.20
	3	1"	1 1/8"		27002	1.55
6"	1	7/16"	3/4"	1/2"	27003	1.20
	2	1 1/16"	1"		27004	1.65
	3	1"	1 3/8"		27005	2.20
8"	1	7/16"	7/8"	5/8"	27009	1.70
	2	1 1/16"	1 1/8"		27010	2.65
	3	1"	1 1/2"		27011	3.55
10"	4	1 3/16"	1 3/8"	3/4"	27012	5.95
12"	4	1 3/8"	2 3/4"	1 1/4"	27013	7.30

.005" WIRE DIAMETER SIZE

4"	1	7/16"	5/8"	1/2"	23208	1.45
	2	1 1/16"	7/8"		23209	1.95
	3	1"	1 1/8"		23210	2.70
6"	1	7/16"	3/4"	1/2"	23211	2.10
	2	1 1/16"	1"		23212	3.50
	3	1"	1 3/8"		23213	5.15
8"	1	7/16"	7/8"	5/8"	23217	2.65
	2	1 1/16"	1 1/8"		23218	4.30
	3	1"	1 1/2"		23219	6.10

*Price includes one set of Arbor Hole Adaptors. The size Adaptor normally furnished is indicated above, but any other size from 3/8" to 1 1/4" can be substituted, if specified in ordering.

GRINDING WHEELS



UNIT	CAT. NO.	PRICE	GRADE
6" Junior, 6" Standard Bench Grinder (A)	18124	\$2.35	Fine 60K
	18125	2.35	Med. 36G
6" H.D. Bench Grinder (H, K and L)	15315	2.65	Med. 36G
	15314	2.65	Fine 60K
6" Bench Grinder (Ball Bearing) (G)	13950	3.25	Med. 36G
	5183	3.25	Fine 60K
7" Bench Grinder (Type B)	14236	4.00	Med. 36G
	14235	4.00	Fine 60K
8" Bench Grinder (Type F and G)	18061	5.00	Med. 36K
	18062	5.00	Fine 60M
10" Bench Grinder (Type B, C and D)	10275	7.75	Med. 40K
	10274	7.75	Coarse 24H
Portable Grinders & Die Grinders	20330	1.25	36-598E
	20329	1.35	36-598E
	24317	1.60	36-598E
4" Portable Grinder	6772	1.65	Med. 36G
5" Portable Grinder	3042	2.35	Med. 36G
6" Portable Grinder	3148	3.10	Med. 36G
7" Junior Sander	10663	2.10	Med. 36H
7" Standard Sander	24050	4.85	163-9-K4
7" H.D. Sander	23444	6.90	163-9-K4
9" H.D. Sander	18039	9.00	163-9-K4

VACKAR—Electric Vacuum Cleaner No. 95 VACKAR

A super-powered cleaner for both automotive and industrial use. With both inlet and outlet hose connections, it can be used as a vacuum cleaner or a blower. The No. 95 Vackar makes an ideal all-purpose cleaner for heavy-duty service in garages, super-service stations, and wash-racks.

Its dual service as cleaner and blower also adapts it to all types of industrial cleaning. It is self-contained, rolls easily over rough floors on ball-bearing swivel casters and its 15-foot flexible hose easily reaches out-of-the-way corners.



Dimensions: Height, 28"; Diameter of top, 16 1/4"; Diameter of Base, 18 1/2". Sealed vacuum pull, 65"; Vacuum with 1" orifice, 18".

Net weight, 52 lbs.; Shipping weight, 67 lbs.

Price, complete, specify voltage—(Cat. No. 95).....\$160.00

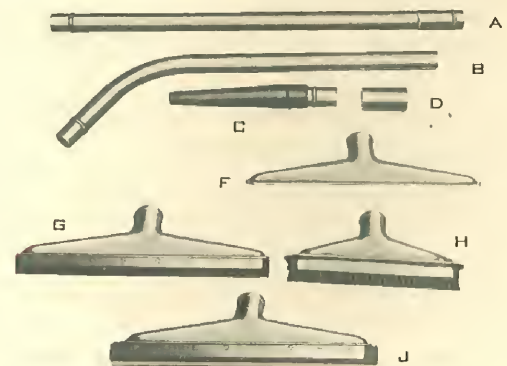
Available for 110 or 220 volts. On special order 125 or 240 volts. Universal Motor.

No. 95 VACKAR REPLACEMENT ATTACHMENTS

No. 33058 15-foot Flexible Hose, Extra Flexible.....	\$16.00
No. 23891 Wide Upholstery Nozzle.....	2.85
No. 23903 Flat Tube Nozzle.....	.50
No. 18186 6 1/2" Upholstery Brush.....	1.15
No. 23676 Set of 3 Ball-Bearing Casters.....	4.25

INDUSTRIAL ATTACHMENTS FOR VACKAR

To expand the use of the Vackar to industrial cleaning, a special group of attachments is listed below. The various nozzles fit the long rigid operator's handle, which is in two parts. This handle requires the Coupling Adaptor to fit the hose of the No. 95 Vackar. The Blower Tool also uses the Coupling Adaptor to fit the No. 95 Vackar hose.



No. 23902 15-foot Flexible Hose, Semi-Rigid.....	\$14.00
No. 24834 Operator's Handle—Straight Section* (A).....	4.60
No. 24835 Operator's Handle—Curved Section (B).....	4.60
No. 26081 Soft Rubber Blower Tool* (C).....	2.10
No. 24836 Coupling Adaptor for No. 95 Vackar (D).....	1.30
No. 24833 14" Floor Nozzle** (F).....	9.50
No. 26084 14" Felt Floor Tool** (G).....	14.50
No. 26086 Replacement Felt Strip for No. 26084 (Set of 2).....	1.90
No. 26083 10" Floor Brush Tool** (H).....	14.50
No. 26600 Replacement Nozzle for No. 26083.....	8.00
No. 26518 Replacement Brush for No. 26083.....	6.50
No. 26085 14" Squeegee Nozzle** (J).....	15.25
No. 26087 Replacement Wide Rubber Strip for No. 26085 (Set of 2)†	2.55
No. 26088 Replacement Narrow Rubber Strip for No. 26085 (Set of 2)†	
No. 25913 Extension Coupling (Joins 2 Hose Sections).....	1.40

†Price includes Set of No. 26087 and Set of No. 26088.

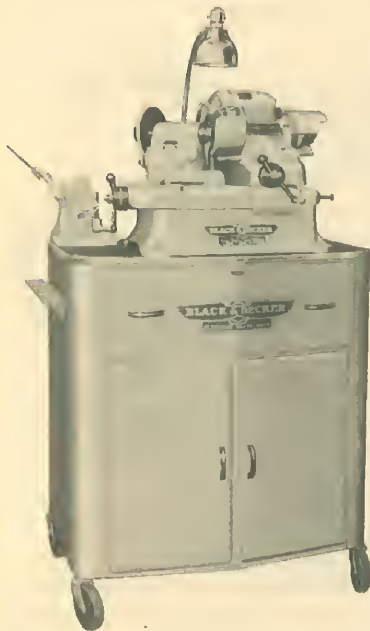
*Use with Adaptor No. 24836 for No. 95 Vackar.

**Fit on end of Operator's Handle—Nos. 24834-24835.



"ELECTRIC TOOL HEADQUARTERS"

ELECTRIC VALVE SHOP



A complete valve reconditioning "shop" on wheels. Smart display of precision equipment helps sell reconditioning jobs; sturdy metal cabinet carries all tools necessary for complete, accurate job right at the car. Roomy cabinet top holds Super-Service Refacer and Vibro-Centric Dressing Stand; large drawer has definite space for each item of Vibro-Centric equipment, including Pilots, Stones and Sleeves, plus carbon cleaning brushes, valve guide cleaners and room for other hand tools; lower storage section for Vibro-Centric Driver and other items such as gaskets, drills, etc.

Cabinet Dimensions: Height, 35"; width, 35"; depth, 20". Shipping weights: Valve Shop, 322 lbs.; Cabinet only, 180 lbs.

STANDARD ELECTRIC VALVE SHOP

- 1 Valve Shop Cabinet.
- 1 Super-Service Refacer (Wet-Grinding or Standard).
- 1 Leatherette Refacer Cover
- 1 Standard Driving Unit (Straight or 55°).
- 3 Valve Guide Cleaners: 21441 ($\frac{3}{16}$ ""); 21445 ($\frac{3}{8}$ ""); 21449 ($\frac{1}{16}$ "").
- 2 Carbon Cleaning Brushes: 21416 (Heavy Duty); 21417 (Side Flare).
- 1 Standard Stone Dressing Stand—No. 20153.
- 2 Standard Stone Sleeves—No. 22100.
- 5 Self-Centering Pilots
- 2 Hard Seat Stones
- 6 Soft Seat Stones
- 2 Finishing Stones

As itemized in Standard
Universal Vibro-Centric Kit.

Standard Voltage—110 or 220. On special order 125 or 240 volts.

Price, Standard Valve Shop, complete, specify voltage	
—with No. 115 Standard Straight Driver and—	
$\frac{9}{16}$ " Standard Refacer—(Cat. No. 509).....	\$426.00
$\frac{11}{16}$ " Standard Refacer—(Cat. No. 510).....	436.00
$\frac{9}{16}$ " Wet-Grinding Refacer—(Cat. No. 514).....	441.00
$\frac{11}{16}$ " Wet-Grinding Refacer—(Cat. No. 515).....	451.00
—with No. 440 Standard 55° Driver and—	
$\frac{9}{16}$ " Standard Refacer—(Cat. No. 465).....	432.00
$\frac{11}{16}$ " Standard Refacer—(Cat. No. 466).....	442.00
$\frac{9}{16}$ " Wet-Grinding Refacer—(Cat. No. 463).....	447.00
$\frac{11}{16}$ " Wet-Grinding Refacer—(Cat. No. 464).....	457.00

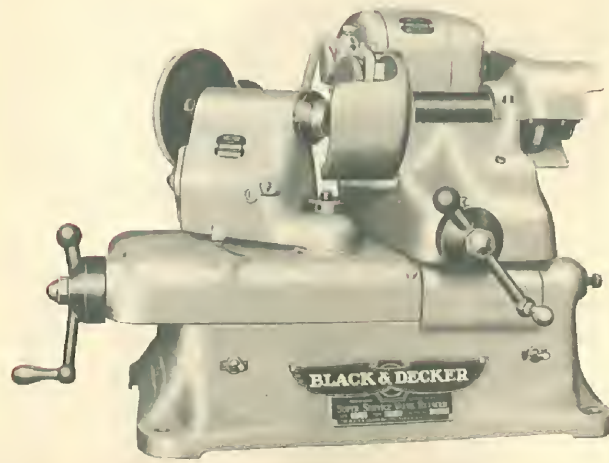
HEAVY-DUTY ELECTRIC VALVE SHOP

- 1 Valve Shop Cabinet.
- 1 Super-Service Refacer (Wet-Grinding or Standard).
- 3 Valve Guide Cleaners: 21441 ($\frac{3}{16}$ ""); 21445 ($\frac{3}{8}$ ""); 21449 ($\frac{1}{16}$ "").
- 2 Carbon Cleaning Brushes: 21416 (Heavy-Duty); 21417 (Side Flare)
- Contents of Heavy-Duty Universal Vibro-Centric Kit; including Heavy-Duty Driving Unit, Standard Dressing Stand, 2 Standard Stone Sleeves, 5 Self-Centering Pilots; 8 Hard Seat Stones, 7 Soft Seat Stones, Pilot Turning Wrench.

Standard Voltage—110 or 220. On special order 125 or 240 volts.

Prices, Heavy-Duty Electric Valve Shop, complete, specify voltage—with—	
$\frac{9}{16}$ " Standard Refacer—(Cat. No. 341).....	\$456.00
$\frac{11}{16}$ " Standard Refacer—(Cat. No. 342).....	466.00
$\frac{9}{16}$ " Wet-Grinding Refacer—(Cat. No. 339).....	471.00
$\frac{11}{16}$ " Wet-Grinding Refacer—(Cat. No. 340).....	481.00
Price, Valve Shop Cabinet only—(Cat. No. 31363).....	85.00

SUPER SERVICE VALVE REFACERS



Dry Refacer Weight: Net, 143 lbs.; shipping, 163 lbs.

Wet Refacer Weight: Net, 146 lbs.; shipping, 174 lbs.

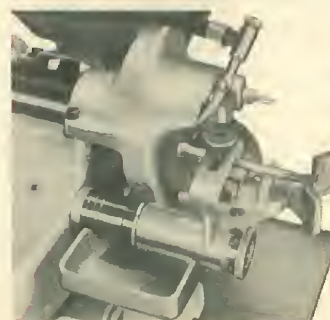
Precision Valve Grinders combining speed of operation, smooth finish and absolute accuracy in the reconditioned valve face. Two independent universal motors give abundant power and in addition—a third independent motor for driving pump on Wet-Grinding Refacer only; feed screws give lever-feed speed with screw-feed accuracy; 3-point bearing on feed tables gives smooth action; "twin-grip" collet insures accurate alignment of valve face and stem; ball bearing wheel spindle, double-ended to provide for valve stem and rocker arm grinding; universal work head, adaptable to all popular valve angles and stem sizes.

The Super-Service Valve Refacer can be bought in any of four combinations—in either $\frac{9}{16}$ " ($\frac{3}{32}$ "- $\frac{3}{16}$ " stem sizes) or $\frac{11}{16}$ " ($\frac{1}{8}$ "- $\frac{11}{16}$ " stem sizes) and as a Wet-Grinding or Dry-Grinding Refacer. In all models the collet head is adjustable to grind angles from 30° to 90°, and the unit is completely equipped with Universal motors, a 4" grinding wheel and wheel dresser, 3-wire cable and plug; and valve stem collet.

Cat. 106— $\frac{9}{16}$ " Dry-Grinding Super-Service Refacer..	\$235.00
Cat. 107— $\frac{11}{16}$ " Dry-Grinding Super-Service Refacer..	245 00
Cat. 281— $\frac{9}{16}$ " Wet-Grinding Super-Service Refacer..	250.00
Cat. 282— $\frac{11}{16}$ " Wet-Grinding Super-Service Refacer..	260.00

Standard Voltage—110 or 220. On special order 125 or 240 volts.

MICROMETER VALVE STEM GRINDING ATTACHMENT



A new "universal" stem grinding attachment for obtaining exact tappet clearance on all Ford valves and other valves not having tappet adjustments. The same attachment will also grind and true Ford and other tappets. The accuracy and simplicity of this attachment will save many hours of guesswork. Fits all Super-Service (Standard or Wet Grinding) Refacer and operates on the outer end of the wheel spindle; does not interfere with the refacing set-up.

No. 18252 Complete Micrometer Valve Stem Grinding Attachment, as detailed above.....	\$24.00
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"ELECTRIC TOOL HEADQUARTERS"

Black & Decker

NO. 6 UNIVERSAL VALVE & TOOL GRINDER

An unequalled combination of engineering and operating features makes this new Heavy-Duty Production Grinder the outstanding leader in valve reconditioning performance. A wide variety of valve sizes can be refaced on a high-speed production basis and also the flexibility of the machine permits many tool grinding operations such as the sharpening of cutters and reamers. Attachments for grinding Valve Stems, Tappets and Rocker Arms are standard equipment. All controls and adjustments are designed for foolproof, rapid operation and performance in general is unexcelled in today's markets.

Standard Voltage:

110V, 1 Ph., 50-60 cycle, Catalog No. 522.....\$950.00

Available on Special Order:

125V, 1 Ph., 50-60 cycle, Catalog No. 522.....\$950.00

220V, 1 Ph., 50-60 cycle, Catalog No. 522..... 950.00

250V, 1 Ph., 50-60 cycle, Catalog No. 522..... 950.00

110V, 1 Ph., 25 cycle, Catalog No. 523..... 950.00

115V, D.C., Catalog No. 527..... 970.00

Give complete characteristics of your current when ordering.

OUTSTANDING FEATURES:—

1. Range:—Reface valves of any angle from 0° to 90° with valve stems from 1/4" to 1 1/4" in diameter. Head diameters up to 5 1/4" are easily handled.

2. Traverse grind any angle valve from 0° to 90°. This of course includes flat type valves.

3. Air Chuck grips or releases valve stem instantly—alignment is assured with twin grip collets. Regulated valve reduces air pressure of supply line to the 80 to 90 lbs. required by air chuck.

4. A separate universal motor drives the workhead. Motor speed is quickly adjustable to accommodate large and small sized valve heads.

5. Hypoid gearing drives the workhead spindle for the smoothest grinding finish.

6. Work table is mounted on slide bearings of simple, clean design. After long service an adjustment for wear can be made without any disassembling of the parts.

7. For abundant power the grinding wheels are driven by a separate 3/4 horsepower constant-speed motor.

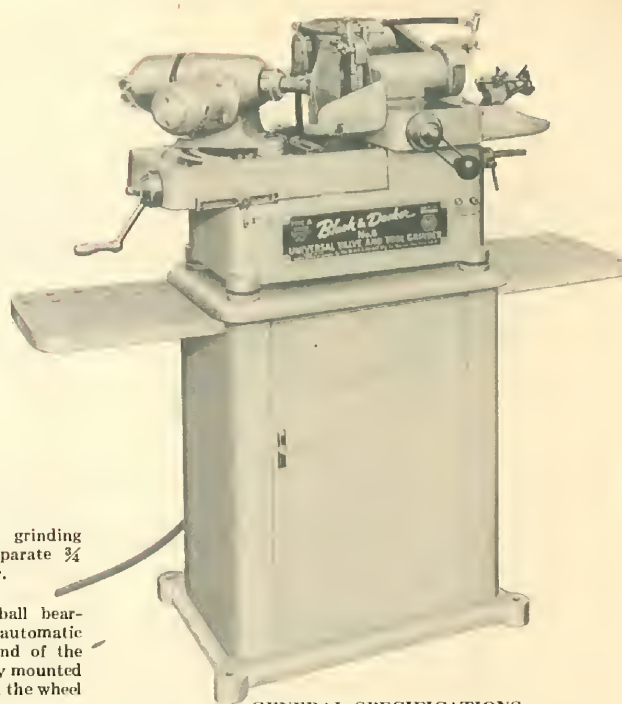
8. Closed-type, grease-sealed ball bearings, pre-loaded, with automatic take-up for wear are at each end of the wheel spindle. Assembly is rigidly mounted in a removable "quill" clamped in the wheel saddle.

9. Automatic work-head motor switch. Turns "on" and "off" as work table moves valve toward and away from wheel. Work table travel is limited by an adjustable stop which prevents grinding the valve stem.

10. A drawer-tank of 2 gallon capacity permits large volume wet grinding. A series of baffle plates "settle" grinding sediment. Fluid nozzles have flow control valves and ball-socket joints.

11. Standard equipment includes attachments for grinding Valve Stems, Tappets and Rocker Arms.

12. Tool Grinding: The flexibility and adjustments possible on this machine suit it for many production jobs and machine shop tool grinding operations.



GENERAL SPECIFICATIONS

Overall Height—50"	Cabinet Net Wt.—160 lbs.
Overall Width—50"	Total Ship. Wt.—500 lbs.
Cabinet—29 1/4" x 24" x 16"	Valve Stem Cap.—1/4" to 1 1/4"
Grinder Net Wt.—290 lbs.	Valve Head Cap.—Up to 5 1/4"

REPLACEMENT EQUIPMENT AND EXTRA GRINDING WHEELS

No. 31729	V-Belt DC and 60 cycle wheel motor.....	\$.75
No. 32588	V-Belt 25 cycle wheel motor.....	1.15
No. 32860	1/4" to 1/2" Collet for short valve stems.....	8.00
No. 18325	1/2" to 3/4" Collet.....	8.00
No. 15200	1/2" to 1 1/4" Collet.....	10.00
No. 31513	3/4" to 1 1/4" Collet.....	12.00
No. 31514	1 1/4" to 1 3/4" Collet.....	12.00
No. 32914	6" x 3/4" x 2"—60N Recessed Grinding Wheel (Standard Equipment).....	3.25
No. 31429	6" x 3/4" x 2"—46N Recessed Grinding Wheel.....	3.25
No. 32822	6" x 3/4" x 2"—80N Recessed Grinding Wheel.....	4.50
No. 20939	4" Recessed Grinding Wheel for Valve Stems and Rocker Arms (Standard Equipment).....	2.40

ACCESSORIES & REPLACEMENTS FOR SUPER-SERVICE VALVE REFACEERS

No. 24247 Wet Grinding Attachment, complete.....\$20.00
Can be used with Micrometer Valve Stem Grinding Attachment or Rocker Arm Grinding Attachment on Wet Grinding Super-Service Refacers only.

No. 20949 Rocker Arm Grinding Attachment..... 15.00
Operates on outer end of Super-Service Refacer Wheel Spindle. Consists of a Micrometer Feed mounted on a machine bar. A bracket holds the diamond point for dressing the 4" recessed wheel. An adjustable arm is pivoted and slotted to permit the grinding of various sized Rocker Arms. A double cone clamp holds the Rocker Arm and is adjustable for various sized bores. A Grinding Wheel is not included with the attachment. Use No. 20939 4" recessed Grinding Wheel.

No. 19898 15° and 90° Dressing Attachment..... 10.50
Includes No. 19897 special Grinding Wheel for 15° and 90° valves.

No. 19897 Special Wheel only for 15° and 90° valves..... 3.00

No. 31471 Standard 4" Wheel for hard valves.....\$ 3.00

No. 20939 4" Recessed Wheel for Micrometer Attachment and Rocker Arm Grinding Attachment..... 2.40

No. 33056 Special 4" Wheel for Stellite and Fine finishes..... 3.00

No. 18325 Standard Collet (1/2"-3/4" cap.)..... 8.00

No. 15200 Standard Collet (1/2"-1 1/4" cap.)..... 10.00

No. 26060 Special Collet for short valve stems (1/4"-1/2" cap.)..... 8.00

No. 17745 Special Collet for short valve stems (1/2"-1 1/4" cap.)..... 10.00

No. 20934 Wheel Dresser and V-block without Diamond..... 2.25

No. 5574 Diamond and Nib for all Wheel Dressers..... 3.50

No. 32742 Cutter-type Dressing Attachment..... 3.75

No. 16286 V-Belt for Work (Collet) Spindles..... .65

No. 23617 V-Belt for Wheel Motor..... .65

No. 20380 8-oz. Container Grinding Wheel Coolant..... .35

No. 22946 Pint Container Grinding Wheel Coolant..... .60

No. 22947 Quart Container Grinding Wheel Coolant..... .95

No. 22173 Adjustable Lamp, complete with Socket, Switch, etc..... 6.50

No. 32121 Leatherette Refacer Cover..... 3.50

Black & Decker SERVICE



To assure you prompt, efficient service on Black & Decker Products, we operate 28 Factory Service Branches at strategic points throughout the United States and Canada. These Service Branches are manned by Factory-trained personnel and equipped with genuine Black & Decker service and replacement parts. When you need "factory service," you will find a Black & Decker Factory Service Branch within 24 hours of you, ready to serve you as expertly, as reasonably and as promptly as at Towson.

FACTORY SALES and SERVICE BRANCHES

ATLANTA 3, GEORGIA	419 SPRING STREET, N.W.	KANSAS CITY 8, MISSOURI	1603 OAK STREET
BALTIMORE 1, MARYLAND	1311 MARYLAND AVENUE	LOS ANGELES 7, CALIFORNIA	1941 SOUTH FLOWER STREET
BOSTON 15, MASSACHUSETTS	60 BROOKLINE AVENUE	MEMPHIS 3, TENNESSEE	403 MADISON AVENUE
BUFFALO 8, NEW YORK	17 EAST UTICA STREET	MINNEAPOLIS 2, MINNESOTA	1012 MARQUETTE AVENUE
CHARLOTTE 6, NORTH CAROLINA	117 EAST 9th STREET	NEWARK 5, NEW JERSEY	611 McCARTER HIGHWAY
CHICAGO 7, ILLINOIS	1100 WEST JACKSON BOULEVARD	NEW ORLEANS 12, LOUISIANA	639 DRYADES STREET
CINCINNATI 2, OHIO	1094 GILBERT AVENUE	NEW YORK 13, NEW YORK	55 VANDAM STREET
CLEVELAND 15, OHIO	21st AT CARNEGIE AVENUE	PHILADELPHIA 30, PENNSYLVANIA	710 NORTH 16th STREET
DALLAS 1, TEXAS	2613 ROSS AVENUE	PITTSBURGH 13, PENNSYLVANIA	4740 BAUM BOULEVARD
DENVER 4, COLORADO	1010 BANNOCK STREET	SAN FRANCISCO 3, CALIFORNIA	1090 BRYANT STREET
DETROIT 2, MICHIGAN	302B EAST GRAND BOULEVARD	SEATTLE 9, WASHINGTON	429 WESTLAKE AVENUE, N.
HOUSTON 3, TEXAS	409 VELASCO STREET	ST. LOUIS 3, MISSOURI	2822 LOCUST STREET
INDIANAPOLIS 4, INDIANA	935 NORTH ILLINOIS STREET		

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Winnipeg, Manitoba, Canada

BLACK & DECKER, Limited
Harmondsworth, Middlesex, England

BLACK & DECKER (A'sia), PTY., LTD.
4 Bridge Road, Glebe, Sydney, Australia

BLACK & DECKER, INC.
Rua Oriente 768, Sao Paulo, Brazil

THE BLACK & DECKER MFG. CO.

"ELECTRIC TOOL HEADQUARTERS"

TOWSON 4, MARYLAND, U. S. A.